UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 9410

March 11, 2004

First Industrial Realty Trust, Inc.
Attn: Valerie Baxa-Director Environmental
311 S. Wacker Drive, Suite 4000
Chicago, IL 60606

Re: Property Located at 333 South Turnbull Canyon Road, City of Industry, California

Dear Ms. Baxa:

I am writing in response to a February 10, 2004 request by Deborah Orr of Bradburne, Briller & Johnson, LLC., concerning First Industrial's property located at 333 South Turnbull Canyon Road, City of Industry, California (the "Property"). As you are aware, the Property is located within the Puente Valley Operable Unit (PVOU) of the San Gabriel Valley Superfund Site, Area 4. The U.S. Environmental Protection Agency (EPA) is currently performing response actions to address groundwater within the PVOU. EPA has identified the Property as a source of groundwater contamination at the PVOU. In addition, actions have been taken to address contamination on the Property at the direction of the State of California (the "State"). If you have any questions regarding potential State liability, you must contact the State.

The bona fide prospective purchaser provision of the Small Business Liability Relief and Brownfields Revitalization Act of 2002, referred to as the Brownfields Amendments to Superfund, provides that a person meeting certain criteria is protected from Superfund liability. EPA provided your contractor, Deborah Orr with guidance documents discussing these requirements before First Industrial purchased the Property in December of 2003. As noted in these guidance documents, if EPA takes a future response action that increases the fair market value of the Property, EPA may have a windfall lien on the Property. The windfall lien would be limited to the increase in fair market value attributable to EPA's response action, capped by EPA's unrecovered response costs.

To qualify as a bona fide prospective purchaser, a person must (**among other requirements**) take "reasonable steps" with respect to stopping continuing releases, preventing threatened future releases, and preventing or limiting human, environmental, or natural resources exposure to earlier releases. A bona fide prospective purchaser must also provide access to appropriate regulatory agencies, including EPA and the State should they choose to conduct further response activities on the Property.

Based on the information EPA has evaluated to date, EPA believes that the following would be appropriate reasonable steps for First Industrial with respect to potential hazardous substance contamination remaining at or under the Property:

1) No drilling of any extraction or injection wells on the Property, without first obtaining approval from EPA and the State;
2) No extraction of groundwater water or injection of anything into any existing wells on the Property without first obtaining approval from EPA and the State; and
3) No destruction or abandonment of any groundwater wells on the Property without prior approval from EPA and the State. Any EPA and State approved destruction or abandonment of wells must be conducted in accordance with State law.

This letter does not provide a release from CERCLA liability, but only provides information with respect to reasonable steps based on the information U.S. EPA has available to it. This letter is based on the nature and extent of contamination known to EPA at this time. If additional information regarding the nature and extent of hazardous substance contamination at the Property becomes available, additional actions may be necessary to satisfy the reasonable steps criterion. In particular, if new areas of contamination are identified, First Industrial should ensure that reasonable steps are undertaken. As the Property owner, First Industrial should ensure that it is aware of the condition of the Property so that it is able to take reasonable steps with respect to any hazardous substance contamination at or on the Property.

Please note that the bona fide prospective purchaser provision has a number of conditions in addition to those requiring the property owner to take reasonable steps. Taking reasonable steps, providing access, and many of the other conditions are continuing obligations of the bona fide prospective purchaser. As noted above, EPA provided guidance documents discussing these requirements before First Industrial purchased the Property. Based on the information provided by EPA, First Industrial should have assessed whether it satisfied each of the statutory conditions for the bona fide prospective purchaser provision before it purchased the Property and should continue to meet the applicable conditions.

EPA hopes this information is useful to you. If you have any questions, or wish to discuss this letter, please feel free to contact Dustin Minor, Assistant Regional Counsel, at (415) 972-3888.

Sincerely,

Elizabeth Adams

Elizabeth Adams
Branch Chief

cc: Penelope McDaniel, Remedial Project Manager
Dustin Minor, Assistant Regional Counsel

SOIL AND GROUND-WATER INVESTIGATION
CALMAR FACILITY
CITY OF INDUSTRY, CALIFORNIA

January 3, 1995
LF 2455.00-12

vol I

Prepared for
Calmar, Inc.
333 Turnbull Canyon Road
City of Industry, California 91749

LEVINE·FRICKE

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LEVINE·FRICKE

January 3, 1995

LF 2455.00-12

CERTIFICATION *

All hydrogeologic and geologic information, conclusions, or recommendations in this report have been prepared under the supervision of and reviewed by a Levine·Fricke California Registered Geologist.

REGISTERED GEOLOGIST
DAVID E. FIELD
No. 4629
1/5/95
STATE OF CALIFORNIA

David E. Field, R.G.
California Registered Geologist #4629

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LEVINE·FRICKE

January 3, 1995

LF 2455.00-12

SOIL AND GROUND-WATER INVESTIGATION AT THE CALMAR FACILITY CITY OF INDUSTRY, CALIFORNIA

1.0 INTRODUCTION

At the request of Latham & Watkins, attorneys for Calmar, Inc., Levine·Fricke conducted a soil and ground-water investigation at the Calmar facility located at 333 South Turnbull Canyon Road in the City of Industry, Los Angeles County, California ("the Site"; Figure 1). Based on previous investigations conducted by BCL Associates and Camp, Dresser & McKee, the California Regional Water Quality Control Board, Los Angeles Region (RWQCB) requested further investigation at the Site.

2.0 BACKGROUND

Previous investigations have shown that ground water beneath the Site has been affected by chlorinated volatile organic compounds (VOCs). VOCs have also been detected at relatively low concentrations (less than or equal to 1 part per million [ppm]) in shallow soils (less than 10 feet below ground surface) at the Site.

Calmar retained BCL Associates to conduct an environmental assessment and audit of the Site in 1988. The results of BCL Associates' investigation, reported in October 1988, indicated relatively minor concentrations (less than 1 ppm) of VOCs in shallow soils and concentrations of VOCs in the ground water at levels that exceeded California drinking water regulation concentrations. The major analytes detected in soil and ground-water samples were trichloroethene (TCE) and tetrachloroethene (PCE). Other analytes detected included 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethylene (1,1-DCE), and 1,1,1-trichloroethane (1,1,1-TCA).

Camp, Dresser & McKee conducted a soil-gas survey at the Site in 1991 (reported May 1991). Elevated concentrations ($\leq$820 parts per billion by volume; ppbv) of the abovementioned analytes were detected in soil gases beneath the Site.

Camp, Dresser & McKee and Levine·Fricke conducted ground-water monitoring in 1991. The results were similar to those found during the BCL Associates' 1988

ground-water sampling. Camp, Dresser & McKee's monitoring results were summarized in reports dated May and July 1991, and Levine·Fricke's results were summarized in a report dated November 1991.

Levine·Fricke provided the RWQCB with a work plan December 27, 1991, and a revised work plan on May 11, 1992. The RWQCB requested in its letter to Calmar dated September 18, 1992, that three rounds of vapor sampling be conducted, the first no later than two weeks after installation of the probes and the third approximately three months after installation. The scope of work was further modified in Levine·Fricke's letter dated November 2, 1992. Additional modifications to the scope of work were made to include the RWQCB's request.

3.0 OBJECTIVES

The objective of this investigation was to assess soil and ground-water conditions beneath and hydraulically upgradient from the Site. The investigation included collection and analysis of soil, vapor, and ground-water samples in on- and off-site areas.

4.0 PHASE I SOIL AND GROUND-WATER INVESTIGATION: DESCRIPTION OF PHASE I TASKS

Levine·Fricke conducted a Phase I investigation at the Site in March through April 1993. The following tasks were performed:

- Drilled four soil borings
- Installed multilevel (five to six) soil-vapor probes in each of the four soil borings (nested vapor probes [NVPs])
- Installed four ground-water monitoring wells (one on-site upgradient and three off-site upgradient) and developed the four monitoring wells plus one existing well
- Installed multilevel vapor probes in the annulus of two off-site ground-water monitoring wells (for a total of six NVPs installed during this phase of work)
- Analyzed soil samples obtained from the soil borings and monitoring well borings

- Sampled and analyzed ground water from all monitoring wells
- Sampled and analyzed soil vapor from the six NVPs

These tasks are further described below.

4.1 Soil Borings

Four soil borings were drilled between March 31 and April 3, 1993, by Gregg Drilling & Testing, Inc., under the direction of Levine·Fricke. Soil boring LFSB-1 was located inside the Calmar facility, next to the clarifier; soil boring LFSB-2 was located along the discharge pipe from the clarifier; soil boring LFSB-3 was located along the southwestern fence line of the Site in a former drum storage area; and soil boring LFSB-4 was located in another former drum storage area, near the western corner of the building. Locations of the borings are shown in Figure 2.

Soil boring LFSB-4 was drilled on March 31, 1993, and was continuously sampled for detailed lithologic control. LFSB-3 was drilled on April 1, 1993, and sampled at 2.5-foot intervals to also provide lithologic control. Borings LFSB-1 and LFSB-2 were drilled on April 3, 1993, and portions of them were sampled at 2.5-foot intervals at the discretion of the Levine·Fricke geologist in the field. Specific sample intervals and lithologies are shown on the boring logs in Appendix A. Drilling and sampling were conducted in accordance with the procedures described in Appendix B.

Soil samples obtained from the borings were analyzed for halogenated and aromatic volatile organics using EPA Methods 8010 and 8020. Analyses were performed on a one-week turnaround basis by Terra Tech Labs of Santa Ana, California. This laboratory is certified by the California Environmental Protection Agency for the applied test methods. Furthermore, Terra Tech used protocols and quality control procedures recommended by the RWQCB's Well Investigation Program.

4.2 Nested Vapor Probe Installation

Soil-vapor probes were placed at multiple depths within the boreholes of soil borings LFSB-1, LFSB-2, LFSB-3, and LFSB-4. These converted soil borings are referred to as nested vapor probes and are renamed NVP-1, NVP-2, NVP-3, and NVP-4, respectively (Figure 2).

Nested vapor probes NVP-1, NVP-2, and NVP-3 each contain five probes, numbered 1 through 5, and nested vapor probe NVP-4 contains six individual probes, numbered 1 through 6. Each probe was placed at a discrete depth (see Table 1). Each vapor probe

consists of a stainless steel perforated tip attached to a 1/4-inch outside diameter Teflon tubing that extends to the ground surface. Each sampling tip is surrounded by a sand pack and separated by bentonite seals. Specific NVP construction details and vapor probe depths are shown in the boring logs in Appendix A. NVP construction was conducted in accordance with the procedures described in Appendix B.

Depth placement of the probes was based primarily on lithology. Most of the probes were placed just above interfaces between coarse-grained soil and fine-grained soil, as preferred by Mr. Charles Chang of the RWQCB, who was present in the field during several of the NVP installations. Other locations were chosen based on proximity to ground water or the detection of elevated VOCs while screening soil head space samples in the field with a flame ionization detector (FID).

Nested vapor probes were installed directly in soil borings LFSB-1, LFSB-2, and LFSB-3. Soil boring LFSB-4 was drilled and completely backfilled with bentonite grout on March 31, 1993. A second borehole was then redrilled approximately 3 feet west of the original LFSB-4 borehole, without soil sampling, on April 1, 1993. The second borehole was drilled specifically for installing the nested vapor probes for NVP-4.

In July 1993, Calmar was granted access to the neighboring property southwest of the Calmar site by the owner, Hunsaker Development of Irvine, California. On July 19 and 20, 1993, two additional monitoring wells (MW-6 and MW-7) were installed at the Hunsaker site. Two NVPs were installed in the annulus of these monitoring wells, NVP-5 in the annulus of well MW-6 and NVP-6 in the annulus of well MW-7.

4.3 Monitoring Well Installation and Development

Four shallow ground-water monitoring wells, MW-4 through MW-7, were installed for the purpose of further evaluating the ground-water conditions hydraulically upgradient from the Site. Monitoring wells were installed on April 2 and 5, 1993. Ground-water monitoring well MW-4 was installed on the southeastern side of the Site near South Turnbull Canyon Road, and MW-5 was installed approximately 300 feet to the south near the curb face of South Turnbull Canyon Road (Figure 2). As stated above, monitoring wells MW-6 and MW-7 were installed July 19 and 20, 1993, at the neighboring Hunsaker property. These four new wells supplement six existing wells at the Site, P-1, P-2, P-3, MW-1, MW-2, and MW-3.

All new and previously existing monitoring wells, with the exception of P-2, which was inaccessible to surveying equipment, were surveyed or resurveyed by Favreau & Savage, Inc., of Newport Beach, California. The casing tops of wells P-1 and MW-3 were trimmed on April 7, 1993, to allow better expanding cap seals.

Well locations are shown in Figure 2 and their elevations are summarized in Table 2. Specific well construction details are shown on the well logs in Appendix A. All drilling and well construction were conducted in accordance with the procedures described in Appendix B.

Soil samples obtained from the boreholes and submitted for laboratory analysis were analyzed for halogenated and aromatic VOCs using EPA Methods 8010 and 8020. Analyses were performed on a one-week turnaround basis by Terra Tech Labs. Laboratory data sheets and chain-of-custody documents for the soil analyses are included in Appendix C. Soil analytical results are discussed in Section 5.1.1., summarized in Table 3, and illustrated in Figure 3.

Levine·Fricke's Revised Work Plan to Conduct a Phase I Soil and Ground-Water Investigation at the Calmar facility, dated May 11, 1992, proposed to redrill and deepen existing monitoring well MW-3, which was almost dry. However, during this phase of field work, the well had more than 6 feet of water. It was decided that the well would be useful as a ground-water monitoring point and the deepening was canceled.

Monitoring wells MW-4, MW-5, and P-1 were purged and developed on April 9, 1993, by H-F Drilling, Inc., of Fullerton, California. P-1 was developed because of slow recovery observed during previous sampling. Wells MW-6 and MW-7 were developed on July 27, 1993. This was done in accordance with the procedures described in Appendix B.

4.4 Ground-Water Sampling and Chemical Analysis

In addition to sampling of newly installed wells, five quarterly sampling events of all existing wells have also been conducted in conjunction with the Phase I work. These quarterly sampling events occurred in April, August, and December 1993 and March and June 1994.

Ground-water samples were collected from ground-water monitoring wells P-2, P-3, MW-1, MW-2, and MW-3 on April 15, 1993, and from monitoring wells P-1, MW-4, and MW-5 on April 16, 1993. The newly installed wells MW-4 and MW-5 were again sampled on April 23, 1993. For quality assurance/quality control (QA/QC) purposes, duplicate samples from monitoring wells P-3 (labeled P-30) and P-1 (labeled P-10) were obtained on April 15, 1993, and April 16, 1993, respectively. Equipment blank samples were also obtained on the same dates.

Ground-water samples were again collected from all monitoring wells and newly installed wells MW-6 and MW-7 on August 2 and 3, 1993. For QA/QC purposes,

duplicate ground-water samples were collected from wells MW-3 and MW-7 during this sampling event, as well as equipment blanks each day.

A second set of ground-water samples was collected from newly installed wells MW-6 and MW-7 on August 10, 1993. For QA/QC purposes, a duplicate sample was collected from MW-6, and an equipment blank sample was collected.

For each subsequent sampling event, all wells were measured for ground-water levels and sampled for chemical analysis. QA samples were collected during each sampling event in accordance with the RWQCB's Well Investigation Program (WIP).

Ground water from the wells was analyzed for purgeable halogenated VOCs using EPA Method 8010 (601) and for purgeable aromatic VOCs using EPA Method 8020 (602). At the request of Calmar, the RWQCB granted the elimination of the EPA Method 8020 analysis for the sampling events after August 1993 (see RWQCB letter dated December 16, 1993). Analysis for EPA Method 8020 will be conducted on an annual basis in the future. Ground-water sampling procedures are described in Appendix B. Analytical results are discussed in Section 5.2.2. Appendix D contains field notes from the sampling activities. Laboratory case narrative deliverables are included in Appendix E, which has been provided to the RWQCB. Appendix E is available to other parties on request.

4.5 Evaluation of Ground-Water Elevations

Depth to ground water was measured in all wells to the nearest 0.01 foot using an electric well sounder on April 15, July 30, and November 30, 1993, and April 28 and and July 27, 1994. The resulting data were used to calculate the ground-water elevation in each well. These data are summarized in Section 5.2.1.

4.6 Soil-Vapor Sampling and Chemical Analysis

Soil vapors were sampled from all vapor probes on April 14, May 13, and June 25, 1993, by Terra Tech Labs under the direction of Levine·Fricke. Terra Tech's on-site laboratory analyzed samples immediately after they were obtained from each individual probe for the 22 target analytes, as specified by the RWQCB in the well investigation program. This laboratory has been field-audited by the RWQCB for the applied test methods.

Because of delays in access negotiations at the Hunsaker property, soil vapors from NVP-5 and NVP-6 (on the Hunsaker property) were sampled on August 4 and 31, 1993.

At the writing of this report, only two sets of samples have been collected and analyzed from soil-vapor probes at the Hunsaker property.

Laboratory data sheets, chain-of-custody documents, and sampling protocols for the vapor analyses are included in Appendix C. Vapor analytical results are discussed in Section 5.1.2.

5.0 PHASE I RESULTS

5.1 Soil Conditions

5.1.1 Soil Chemical Analytical Results

Soil samples were collected from soil borings LFSB-1, LFSB-2, LFSB-3, and LFSB-4 and from the boreholes drilled to install monitoring wells MW-4 through MW-7 (total of 8 borings and boreholes). Six soil samples were analyzed from borings LFSB-1, MW-7, and LFSB-4; four soil samples were analyzed from each of the other borings and boreholes.

Samples analyzed from borings LFSB-1, LFSB-4, and MW-6 included comparable samples (LFSB-1-30/LFSB-1-30.5, LFSB-4-31/LFSB-4-31.5, and MW-6-30/MW-6 Comp) for QA/QC purposes. Comparable samples are defined as soil samples from adjacent brass sleeves that are obtained at the same time from within a 1.5-foot drive sample interval.

<u>EPA Method 8010</u>

Analysis of soil sampled from soil borings LFB-1, LFSB-2, LFSB-3, LFSB-4, MW-5, MW-6, and MW-7 detected halogenated VOCs at concentrations exceeding the laboratory detection limits of 1 part per billion (ppb). Refer to Figure 3 and Table 3 for a complete summary of EPA Method 8010 analytical results for soils.

The primary VOCs detected in soils during the investigation include PCE and TCE. PCE was present at concentrations ranging from 4 ppb to 210 ppb; TCE at concentrations ranging from 1.1 ppb to 350 ppb. All other VOCs were at relatively low concentrations (less than 3.7 ppb).

Figures 4 through 7 are cross sections and fence diagrams (A-A' and B-B') showing the relative distribution of PCE and TCE in soils on and off site. Based on the data represented in these figures, the following results of the soil investigation are apparent:

PCE

Based on Figures 4 and 5, PCE in the soil matrix appears to be concentrated near soil boring LFSB-4/NVP-4. Concentrations at LFSB-4/NVP-4 range from 9.1 ppb to 210 ppb. PCE was also detected at an elevated concentration of 29 ppb in clayey soils near the ground-water table at MW-6/NVP-5, located on the Hunsaker property. Soil PCE concentrations in the remainder of the investigation area were relatively low (less than 8 ppb).

TCE

Based on Figures 6 and 7, TCE in soil appears to be concentrated in the clayey soils just above the ground-water table at MW-6/NVP-5 and MW-7/NVP-6, located off site on the Hunsaker property. Concentrations of TCE in MW-6/NVP-5 ranged from 1.9 ppb to 350 ppb. Concentrations in MW-7/NVP-6 ranged from 3.3 ppb to 96 ppb. TCE was also found at LFSB-2/NVP-2, LFSB-3/NVP-3, and LFSB-4/NVP-4 at detectable concentrations ranging from 0.0011 ppb to 76 ppb.

<u>EPA Method 8020</u>

Analysis of soil sampled from soil borings LFSB-1, LFSB-2, LFSB-3, LFSB-4, MW-4, MW-5, MW-6, and MW-7 did not detect aromatic volatile organic compounds (benzene, toluene, ethylbenzene, and xylenes [BTEX]) above laboratory detection limits.

5.1.2 Soil-Vapor Analytical Results

Soil-vapor samples were collected at approximately 2, 6, and 10 weeks after installation of the probes. The purpose of sampling at these intervals was to evaluate whether an equilibrium was developing between the soil matrix and soil vapors.

Generally, soil-vapor data indicate that there was fluctuation in analytical results between the sampling events. Among the three events for NVP-1 through NVP-4, the results generally stayed within the same order of magnitude or fluctuated back and forth an order of magnitude, with an overall slight increase in concentrations during the third event. The exception to this was at NVP-4, where PCE increased one to two orders of magnitude in soils more shallow than 25 feet below grade during the third sampling event.

For the purposes of discussion in this report, soil-vapor monitoring data from the second probe purge volume during the second sampling event at each NVP have been used for

assessing the nature of VOCs in soil gases on and off site. These data were selected because:

- Based on probe purge volume tests, the removal of 2 probe volumes prior to collecting a soil-gas sample for analysis appeared to be the optimum procedure to yield a representative soil-gas sample from the subsurface. Adoption of this protocol was based on discussions in the field with Charles Chang from the RWQCB.

- The second sampling event was selected because only two sets of soil-gas samples had been analyzed from NVP-5 and NVP-6 at the writing of this report. Therefore, this represents the greatest time lapse from installation to sampling from these NVPs. The second set from the on-site NVPs was used to have a comparable elapsed time from NVP installation (i.e., approximately six weeks for both on-and off-site NVPs).

On this basis, the data from the May 13, 1993 sampling event for NVP-1 through NVP-4 and the August 31, 1993 sampling event for NVP-5 and NVP-6 are used for the discussion below.

The primary VOCs detected in soil vapors during the investigation were generally similar to the soil matrix results, including PCE, TCE, 1,1,1-TCA, and 1,1-DCE. PCE was present in concentrations ranging from 1.1 ppbv to 2.0 ppbv; TCE at concentrations ranging from 1.1 ppbv to 810 ppbv; and 1,1-DCE at concentrations ranging from 1.1 ppbv to 140 ppbv. All other VOCs present were at relatively low concentrations (less than 0.0019 ppbv). See Table 1 for a summary of results and specific sampling depths.

Figures 8 through 11 are cross sections and fence diagrams (A-A' and B-B') showing the relative distribution of these chemicals in soil vapors on and off site. Based on the data represented in these figures, the following results of the soil-vapor investigation are apparent:

PCE

Based on Figures 8 and 9, the highest concentrations of PCE in soil vapors occur in the vicinity of LFSB-4/NVP-4. PCE soil-vapor concentrations at LFSB-4/NVP-4 ranged from 5.3 ppbv to 76 ppbv. These results are generally in agreement with the soil matrix analytical results discussed above in Section 5.1.1.

Elevated concentrations of PCE (0.022 to 0.024 ppm) were detected in soil-vapor samples from MW-7/NVP-6 located on the Hunsaker property. Elevated concentrations of PCE were also detected in the soil samples from these locations.

TCE

Based on Figures 10 and 11, TCE in soil appears to be concentrated in the soil column in the vicinity of MW-7/NVP-6, located off-site on the Hunsaker property. This generally agrees with the soil matrix data, although the higher concentrations in the soil matrix were in MW-6/NVP-5 and appeared predominantly in the clayey soils near ground water.

EPA Method 8020

Analysis of soil vapors sampled from all probes did not detect aromatic volatile organic compounds (BTEX) above laboratory detection limits.

5.2 Ground-Water Conditions

Quarterly ground-water monitoring has been conducted by Levine·Fricke since April 1993. Sampling events occurred in April, August, and December 1993 and March and June 1994. The RWQCB was notified at least 72 hours before each sampling event. A representative from the RWQCB was present for the June 1994 event. The results of each monitoring event are described below.

5.2.1 Evaluation of Ground-Water Flow Direction and Gradient

On April 15, 1993, shallow ground-water levels were measured in wells MW-1 through MW-5, P-1, P-2, and P-3. For ground-water levels measured after this date, wells MW-6 and MW-7 were included in the data. Additional dates for measurement of ground-water levels included July 30, 1993, November 30, 1993, April 28, 1994, and July 30, 1994.

The lateral ground-water flow direction was estimated for the Site for all dates using the ground-water elevation data summarized in Table 4. Figures 12 through 16 are graphical illustrations of each measuring event. Based on these data, the lateral ground-water flow was consistently in a northerly direction, with a horizontal hydraulic gradient ranging from approximately 0.0054 ft/ft to approximately 0.0074 ft/ft over the monitoring time period. Ground-water levels rose approximately 7 feet from April 1993 to April 1994. Ground-water elevations decreased slightly (approximately 0.8 foot) from April 1994 to July 1994.

These assessments of ground-water gradient and flow direction generally agree with ground-water measurements from previous (pre-April 1993) events.

5.2.2 Ground-Water Analytical Results

The analytical results for the 15-month monitoring period are summarized in Table 5. The primary chemicals that were detected in ground water at the Site (PCE and TCE) have been graphically presented through time in Figures 17A through 17D and 18A through 18D. Because the sampling events in April and August 1993 occurred immediately after major field activities, the discussion below emphasizes these events to establish the distribution of chemicals in ground water at and near the Site. The subsequent sampling events are discussed only to illustrate changes in this distribution that may have occurred over the 15-month monitoring period.

EPA Method 601/8010

Upgradient Analytical Results

Relatively low concentrations of most chemicals detected in ground water beneath the Hunsaker and Calmar sites were present during the 15-month monitoring period in upgradient wells MW-4, MW-5, and P-3, located along Turnbull Canyon Road. Generally, concentrations were less than 10 ppb, with the exception of 1,1-DCE at 63 ppb (April 1993) and 1,1-DCA at 130 ppb (June 1994). These results show that upgradient sources of chemicals are affecting ground-water quality beneath the investigation area.

April 1993 Sampling Event

Ground-water monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, P-1, P-2, and P-3 were sampled April 14 through 16, 1993. Because wells MW-4 and MW-5 had been recently installed, they were resampled on April 23, 1993. Analytical results from this sampling event detected purgeable halogenated VOCs at concentrations exceeding the laboratory detection limits of 1 ppb. PCE, TCE, and 1,1,1-TCA were detected in ground-water samples from all monitoring wells, while 1,1-DCE, 1,1-DCA, and cis-1,2-DCE were detected in several of the monitoring wells. These analytical results were generally in agreement with previous results. Refer to Table 5 for a summary of EPA Method 601/8010 ground-water analytical results.

August 1993 Sampling Event

Following the installation of monitoring wells MW-6 and MW-7 in July 1993, all existing wells and MW-6 and MW-7 were sampled August 2 and 3, 1993. Because wells MW-6 and MW-7 were newly installed, these wells were resampled on August 10, 1993.

Because the August 1993 sampling event represents a complete set of analytical results from all wells, these analytical data have been selected for the discussion of the lateral distribution of chemicals in ground water.

As with soils and soil vapor, PCE and TCE appear to be the primary chemicals detected in ground water in the investigation area. Based on the data represented in these figures, the following results of the investigation are apparent:

PCE

Figure 17A shows the lateral distribution of PCE in ground water in the investigation area. The highest concentration of PCE (160 ppb) was found in well MW-3, located at the northern (downgradient) boundary of the Calmar property.

TCE

Figure 18A shows the lateral distribution of TCE in ground water in the investigation area. The highest concentration of TCE (110 ppb) was found in both wells MW-2 and MW-6 using the second sampling from MW-6 on August 10, 1993. MW-6 is located upgradient from the Calmar property on the Hunsaker property. Elevated concentrations of TCE were found in soils and soil vapors at MW-6/NVP-5. The concentrations of TCE diminish in wells P-2 (93 ppb) and MW-3 (23 ppb), located downgradient from MW-2.

Subsequent Sampling Events

The distribution of chemicals in ground water appeared to be generally consistent from April 1993 to June 1994. Concentrations of VOCs in ground water tended to increase from August 1993 to March 1994, but decreased overall in June 1994. Ground-water elevations followed this same general pattern, increasing in elevation (approximately 7 feet) from April 1993 to April 1994 and beginning to decrease (approximately 0.8 foot) in June 1994. The rise in ground-water elevations and VOC concentrations may be a result of the relatively wet rainy season in the winter of 1992/1993. The decrease in these parameters may be a result of the relatively dry season in the 1993/1994 winter.

Figures 14 through 16 graphically illustrate the fluctuations in ground-water elevations through the 15-month monitoring period.

EPA Method 602/8020

Aromatic VOCs have been detected in ground water sporadically at low concentrations (≤ 2.7 ppb). Benzene was detected once (April 1993) at 1 ppb in a ground-water sample and an equipment blank, indicating either field equipment or laboratory contamination of the samples. However, toluene has been detected sporadically in ground water at concentrations ranging from trace to 2.7 ppb. Refer to Table 5 for a summary of toluene analytical results.

Comparison of Ground-Water Results to Regulatory Limits

Of the chemicals detected in ground water beneath the investigation area, five were detected at concentrations exceeding their respective California maximum contaminant level (MCL) for drinking water during the monitoring period from April 1993 to June 1994 ground-water sampling events. The table below lists these chemicals along with the highest detected concentration and its MCL.

Chemical	Maximum Concentration (ppb)	MCL (ppb)
PCE	410	5
TCE	260	5
1,1-DCE	96	6
1,1-DCA	20	6
cis-1,2-DCE	12	6

6.0 CONCLUSIONS

Based on the results of the investigation and ground-water monitoring, the following conclusions are offered:

- Elevated concentrations of VOCs were found in soils, soil vapors, and ground water at and upgradient from the Site. The primary VOCs detected were PCE and TCE. The highest concentrations of PCE were detected in soils and soil vapor near LFSB-4/NVP-4 and in ground water at MW-3. TCE was found primarily in soils, soil vapors, and ground water in locations upgradient from the Site at MW-6/NVP-5 and MW-

7/NVP-6. The TCE in ground water found beneath the Site appears to be moving onto the Calmar site from an upgradient source.

- The ground-water flow direction beneath the Site has been northerly since measurements were first taken in 1989. Ground-water elevations and the concentration of chemicals in ground water appear to fluctuate relative to the amount of seasonal precipitation. The concentrations of chemicals in ground water appear to increase with rising ground-water elevations.

- The clarifier and trenches inside the Calmar building do not appear to be sources of chemicals to the subsurface. The concentrations of chemicals in the subsurface gradationally decrease when moving from LFSB-3/NVP-3 to the southeast through LFSB-2/NVP-2 and LFSB-1/NVP-1 (cross-section A-A'; Figures 4, 7, 8, and 10). At LFSB-1/NVP-1 no chemicals were detected in soils and only relatively low (less than 4.3 ppbv) concentrations were detected in soil vapors. Based on this distribution of chemicals, the chemicals detected in soil vapors beneath the building are likely a result of the lateral migration of chemical vapors in the unsaturated zone from sources outside the building.

- Ground water entering the investigation area from upgradient contains low concentrations of the chemicals found beneath the investigation area, contributing to the degraded condition beneath the investigation area. Ground water flows into the investigation area from the south.

- BTEX compounds were not detected in soil or soil-vapor samples in the investigation area. This strongly suggests that the Calmar site has not released these chemicals to the subsurface. Therefore, at the request of Calmar, the RWQCB has agreed to limit the EPA Method 8020 analysis to an annual occurrence in future monitoring.

7.0 RECOMMENDATIONS

Based on the results of the Phase I investigation, further characterization of the investigation area will be necessary to clarify the results described herein and meet the requirements of the RWQCB. Based on these results, Levine·Fricke recommends the following actions:

- Conduct one additional monitoring of all NVPs on one date. This will have the advantage of comparing data collected in one time frame and will be used to further confirm the results of the Phase I soil-vapor results.

- In addition to continued ground-water monitoring, the RWQCB has required that a monitoring well to monitor deeper ground water be installed. At the request of Calmar, this well installation was delayed until after the Phase I investigation to optimize the placement of the deeper well. Based on the results of the Phase I investigation, Levine·Fricke recommends that this well be installed near well MW-3. This location is downgradient from potential on- and off-site sources of chemicals, and pairing it with MW-3 will assist in the evaluation of vertical gradients.

Table 1 :
SUMMARY OF WELL CONSTRUCTION DETAILS
Calmar-City of Industry
LF 2455

Well Number	Date Installed	Reference Elevation (feet MSL)	Total Boring Depth (feet BGS)	Total Casing Length (feet)	Casing Diameter	Screened Interval (feet BGS)	Screen Material	Sand Pack Interval (feet BGS)	Bentonite Seal Interval (feet BGS)	Bentonite Grout Interval (feet BGS)
MW-1 (B-16)**	04/02/93	303.16	58.0	57	4	27 - 57	PVC	24 - 58	20 - 24	0 - 20
MW-2 (B-8)**	04/02/93	303.15	50.0	48	4	18 - 48	PVC	15 - 50	11 - 15	0 - 11
MW-3 (B-15)**	04/02/93	302.36	44.0	44	4	14 - 44	PVC	10 - 44	6 - 10	0 - 6
MW-4	04/02/93	304.78	51.5	50	4	30 - 50	SS	28 - 51.5	26 - 28	0 - 26
MW-5	04/05/93	304.09	51.5	50.0	4	30 - 50	SS	28 - 51.5	26 - 28	0 - 26
MW-6	07/19/93	303.50	54.0	50.0	4	33 - 53	SS	31 - 54	29 - 31	*
MW-7	07/20/93	303.04	54.0	53.0	4	33 - 53	SS	31 - 54	29 - 31	*
P-1**	10/14/93	301.65	55.0	50.0	4	20 - 50	PVC	15 - 55	13 - 15	0 - 13
P-2**	10/18/93	303.09	58	55	4	25 - 55	PVC	23 - 58	20 - 23	0 - 20
P-3**	10/17/93	305.01	60	55	4	25 - 55	PVC	22 - 25	20 - 22	0 - 20

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NOTES:

MSL = Mean Sea Level
BGS = Below ground surface
* = 0 - 29 feet BGS Interval for both MW-6 and MW-7 completed with 4 vapor-probe stages separated by bentonite seals
** = Installed by BCL Associates, Inc (all others installed by Levine-Fricke)
PVC = Schedule 40 Polyvinylchloride
SS = Stainless Steel

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Table 2 :
HISTORICAL GROUND-WATER ELEVATION MEASUREMENTS
Calmar-City of Industry
LF 2455

Well Number	Well Elevation (feet-MSL)	Date Sampled	Depth to Water (feet)	Ground-Water Elevation (feet-MSL)	Relative Change (feet)
MW-1	303.32	03/29/89	35.84	267.48	--
		04/29/91	42.65	260.67	-6.81
		05/10/91	42.72	260.60	-0.07
		07/30/91	43.52	259.80	-0.80
		10/11/91	44.24	259.08	-0.72
		03/25/92	43.77	259.55	0.47
	303.16 *	04/15/93	37.01	266.15	6.60
		07/30/93	34.62	268.54	2.39
		11/30/93	32.92	270.24	1.70
		04/28/94	31.11	272.05	1.81
		06/27/94	30.89	272.27	0.22
MW-2	303.29	03/29/89	35.14	268.15	--
		04/29/91	41.38	261.91	-6.24
		05/10/91	41.45	261.84	-0.07
		07/30/91	42.12	261.17	-0.67
		10/11/91	42.67	260.62	-0.55
		03/25/92	42.21	261.08	0.46
	303.15 *	04/15/93	36.10	267.05	5.97
		07/30/93	33.86	269.29	2.24
		11/30/93	32.22	270.93	1.64
		04/28/94	30.42	272.73	1.80
		06/27/94	30.21	272.94	0.21
MW-3	302.67	03/29/89	35.01	267.66	--
		04/29/91	41.67	261.00	-6.66
		05/10/91	41.72	260.95	-0.05
		07/30/91	42.50	260.17	-0.78
		10/11/91	43.11	259.56	-0.61
		03/25/92	42.50	260.17	0.61
	302.36 *	04/15/93	35.92	266.44	6.27
		07/30/93	33.71	268.65	2.21
		11/30/93	NA	--	--
		04/28/94	30.11	272.25	3.60
		06/27/94	29.92	272.44	0.19
MW-4	304.78	04/15/93	35.85	268.93	--
		07/30/93	33.96	270.82	1.89
		11/30/93	32.46	272.32	1.50
		04/28/94	30.76	274.02	1.70
		06/27/94	30.56	274.22	0.20
MW-5	304.09	04/15/93	34.09	270.00	--
		07/30/93	32.31	271.78	1.78
		11/30/93	30.9	273.19	1.41
		04/28/94	29.27	274.82	1.63
		06/27/94	29.04	275.05	0.23

Table 2 :
HISTORICAL GROUND-WATER ELEVATION MEASUREMENTS
Calmar-City of Industry
LF 2455

Well Number	Well Elevation (feet-MSL)	Date Sampled	Depth to Water (feet)	Ground-Water Elevation (feet-MSL)	Relative Change (feet)
MW-6	303.50	07/30/93	33.87	269.63	--
		11/30/93	32.37	271.13	1.50
		04/28/94	30.59	272.91	1.78
		06/27/94	30.35	273.15	0.24
MW-7	303.04	07/30/93	34.00	269.04	--
		11/30/93	32.24	270.80	1.76
		04/28/94	30.43	272.61	1.81
		06/27/94	30.20	272.84	0.23
P-1	301.99	03/29/89	34.06	267.93	--
		04/29/91	40.59	261.40	-6.53
		05/10/91	40.66	261.33	-0.07
		07/30/91	41.40	260.59	-0.74
		10/11/91	41.95	260.04	-0.55
		03/25/92	41.16	260.83	0.79
	301.65 *	04/15/93	34.94	266.71	5.88
		07/30/93	32.76	268.89	2.18
		11/30/93	NA	--	--
		04/28/94	29.11	272.54	3.65
		06/27/94	29.04	272.61	0.07
P-2	303.09	03/29/89	35.14	267.95	--
		04/29/91	42.04	261.05	-6.90
		05/10/91	40.10	262.99	1.94
		07/30/91	42.82	260.27	-2.72
		10/11/91	43.43	259.66	-0.61
		03/25/92	43.01	260.08	0.42
		04/15/93	36.58	266.51	6.43
		07/30/93	34.25	268.84	2.33
		11/30/93	32.59	270.50	1.66
		04/28/94	30.78	272.31	1.81
		06/27/94	30.52	272.57	0.26
P-3	305.11	03/29/89	36.59	268.52	--
		04/29/91	40.59	264.52	-4.00
		05/10/91	40.68	264.43	-0.09
		07/30/91	41.86	263.25	-1.18
		10/11/91	42.07	263.04	-0.21
		03/25/92	41.21	263.90	0.86
	305.01 *	04/15/93	35.12	269.89	5.99
		07/30/93	33.96	271.05	1.16
		11/30/93	32.12	272.89	1.84
		04/28/94	30.48	274.53	1.64
		06/27/94	30.33	274.68	0.15

NOTE: MSL = Mean Sea Level
* = Resurveyed after top of casing trimmed in April 1993.
NA = No access (area flooded).

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Table 3 :
SUMMARY OF SOIL VAPOR QUALITY DATA
DETECTED VOCs ONLY
Calmar-City of Industry
LF 2455
(all values reported in micrograms per liter gas, ug/l)

Sample ID	Date Sampled	Depth (ft)	No. Purge Volumes	Tetra-chloroethene	Trichloro-ethene	1,1,1-Tri-chloroethane	1,1-Di chloroethene	1,1-Di chloroethane	1,2-Dichloro-ethene (c&t)
NVP1-1	04/14/93	4	1	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0
	04/14/93		2	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0
	04/14/93		3	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0
	05/13/93		2	2.7	<1.0	2.6	26	<1.0	<1.0
	06/28/93		2	4.3	<1.0	1.8	2.8	<1.0	<1.0
NVP1-2	04/14/93	11	2	2.2	<1.0	4.5	31	<1.0	<1.0
	05/13/93		2	2.1	1.1	5.3	31	<1.0	<1.0
	06/28/93		2	5.6	<1.0	2.3	3.8	<1.0	<1.0
NVP1-3	04/14/93	18	2	2.0	<1.0	<1.0	<5.0	<1.0	<1.0
	05/13/93		2	2.3	1.4	2.3	28	<1.0	<1.0
	06/28/93		2	6.6	1.4	2.3	8.9	<1.0	<1.0
NVP1-4	04/14/93	31	2	3.2	<1.0	<1.0	40	<1.0	<1.0
	05/13/93		2	2.8	2.8	<1.0	55	<1.0	<1.0
	06/28/93		2	1.6	<1.0	<1.0	<1.0	<1.0	<1.0
NVP1-5	04/14/93	39	1	1.9	<1.0	<1.0	<5.0	<1.0	<1.0
	05/13/93		2	1.3	3.7	<1.0	38	<1.0	<1.0
	06/28/93		2	4.6	3.0	<1.0	<1.0	<1.0	<1.0
NVP2-1	04/14/93	4	2	4.3	4.0	29	31	<1.0	<1.0
	05/13/93		2	1.3	<1.0	<1.0	<1.0	<1.0	<1.0
	06/28/93		2	75	15	57	20	7.0	<1.0
NVP2-2	04/14/93	11	2	6.6	17	54	52	9.4	<1.0
	05/13/93		2	9.8	20	30	41	12	<1.0
	06/28/93		2	33	24	65	26	14	<1.0
NVP2-3	04/14/93	22.5	2	<1.0	2.1	51	46	9.2	<1.0
	05/13/93		2	6.7	16	39	39	12	<1.0
	06/28/93		2	16	28	69	27	19	<1.0
NVP2-4	04/14/93	31	2	3.2	24	10	24	<1.0	<1.0
	05/13/93		2	3.5	19	30	39	2.1	<1.0
	06/28/93		2	14	45	60	26	6.7	<1.0
NVP2-5	04/14/93	37	2	<1.0	<1.0	1.3	<5.0	<1.0	<1.0
	05/13/93		2	1.9	7.1	15	20	1.9	<1.0
	06/28/93		2	5.1	<1.0	<1.0	<1.0	<1.0	<1.0
NVP3-1	04/14/93	8	2	8.4	<1.0	29	<5.0	<1.0	<1.0
	05/13/93		2	23	3.8	30	12	2.7	<1.0
	06/28/93		2	8.8	14	13	9.4	4.2	<1.0

Table 3 :
SUMMARY OF SOIL VAPOR QUALITY DATA
DETECTED VOCs ONLY
Calmar-City of Industry
LF 2455
(all values reported in micrograms per liter gas, ug/l)

Sample ID	Date Sampled	Depth (ft)	No. Purge Volumes	Tetra-chloroethene	Trichloro-ethene	1,1,1-Tri-chloroethane	1,1-Di chloroethene	1,1-Di chloroethane	1,2-Dichloro-ethene (c&t)
NVP3-2	04/14/93	12	1	5.7	<1.0	6.6	<5.0	<1.0	<1.0
	05/13/93		2	15	3.4	21	4.3	1.5	<1.0
	06/28/93		2	4.5	7.6	7.7	2.6	2.1	<1.0
NVP3-3	04/14/93	18	2	15	14	43	40	2.8	<1.0
	05/13/93		2	8.3	1.6	4.3	2.7	<1.0	<1.0
	06/28/93		2	21	30	38	26	6.9	<1.0
NVP3-4	04/14/93	25.5	2	20	31	64	46	6.8	<1.0
	05/13/93		2	5.1	7.4	39	22	4.4	<1.0
	06/28/93		2	29	42	56	29	9.4	<1.0
NVP3-5	04/14/93	34.5	1	4.9	<1.0	47	<5.0	<1.0	<1.0
	05/13/93		2	2.2	14	22	27	3.3	<1.0
	06/28/93		2	2.9	2.0	<1.0	1.1	<1.0	<1.0
NVP4-1	04/14/93	5	1	42	<1.0	<1.0	<5.0	<1.0	<1.0
	04/14/93		2	78	4.5	39	<5.0	<1.0	<1.0
	04/14/93		3	79	4.7	38	<5.0	<1.0	<1.0
	05/13/93		1	27	1.5	3.6	<1.0	<1.0	<1.0
	05/13/93		2	21	<1.0	<1.0	<1.0	<1.0	<1.0
	05/13/93		3	1	<1.0	<1.0	<1.0	<1.0	<1.0
	06/28/93		2	1,100	20	20	4.6	<1.0	<1.0
NVP4-2	04/14/93	12	1	83	5.3	42	<5.0	<1.0	<1.0
	05/13/93		2	27	2.9	25	3.3	<1.0	<1.0
	05/13/93		3	28	1.7	8.2	1.4	<1.0	<1.0
	06/28/93		2	1,100	16	16	5.3	<1.0	<1.0
NVP4-3	04/14/93	17	1	44	5.0	10	5.3	<1.0	<1.0
	04/14/93		2	102	5.9	11	5.3	<1.0	<1.0
	05/13/93		1	17	<1.0	<1.0	<1.0	<1.0	<1.0
	05/13/93		2	70	9.0	13	11	<1.0	<1.0
	06/28/93		2	2,000	14	14	5.5	<1.0	<1.0
NVP4-4	04/14/93	25.5	2	81	4.0	14	14	<1.0	<1.0
	05/13/93		2	76	12	12	11.3	<1.0	<1.0
	06/28/93		2	140	7.6	13	9.3	<1.0	<1.0
NVP4-5	04/14/93	36	1	18	<1.0	16	<5.0	<1.0	<1.0
	04/14/93		2	14	<1.0	<1.0	<5.0	<1.0	<1.0
	04/14/93		3	12	<1.0	<1.0	<5.0	<1.0	<1.0
	05/13/93		1	10.2	<1.0	18	1.5	<1.0	<1.0
	05/13/93		2	5.3	<1.0	4.5	<1.0	<1.0	<1.0
	05/13/93		3	3.8	<1.0	3.1	<1.0	<1.0	<1.0
	06/28/93		2	24	<1.0	<1.0	1.3	<1.0	<1.0

Table 3 :
SUMMARY OF SOIL VAPOR QUALITY DATA
DETECTED VOCs ONLY
Calmar-City of Industry
LF 2455
(all values reported in micrograms per liter gas, ug/l)

Sample ID	Date Sampled	Depth (ft)	No. Purge Volumes	Tetra-chloroethene	Trichloro-ethene	1,1,1-Tri-chloroethane	1,1-Di chloroethene	1,1-Di chloroethane	1,2-Dichloro-ethene (c&t)
NVP4-6	04/14/93	41	1	19	<1.0	14	<5.0	<1.0	<1.0
	05/13/93		2	18	1.4	16	<1.0	<1.0	<1.0
	06/28/93		2	6	<1.0	<1.0	1.1	<1.0	<1.0
NVP5-1	08/04/93	5	2	<1.0	4.3	8.9	<1.0	<1.0	<1.0
	08/31/93		1	<1.0	1.5	1.2	<1.0	<1.0	<1.0
NVP5-2	08/04/93	10	2	<1.0	10	4.9	<1.0	<1.0	<1.0
	08/31/93		1	<1.0	8.3	3.4	3	<1.0	<1.0
NVP5-3	08/04/93	20	2	<1.0	7.1	3.4	<1.0	<1.0	<1.0
	08/31/93		1	<1.0	4.9	2	2.3	<1.0	<1.0
NVP5-4	08/04/93	28	2	<1.0	1.7	<1.0	<1.0	<1.0	<1.0
	08/31/93		1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
NVP6-1	08/04/93	5	2	9.9	19	110	16	1.1	1.3
	08/31/93		1	2.2	4	4.9	6.5	<1.0	<1.0
NVP6-2	08/04/93	10	1	25	36	12	64	2	1.5
	08/04/93		2	22	28	9.9	52	1.8	1.2
	08/04/93		3	27	35	12	73	2.1	1.5
	08/31/93		1	37	48	11	100	<1.0	<1.0
NVP6-3	08/04/93	20	2	24	39	10	84	2.2	<1.0
	08/31/93		1	38	81	13	140	<1.0	<1.0
NVP6-4	08/04/93	28	2	1.1	4.5	1.2	11	<1.0	<1.0
	08/31/93		1	10	40	3.4	98	<1.0	<1.0

050994IKG/scj

2455-T14

NOTES: < =Designates less than laboratory detection limit

QA/QC

Table 4 :
SUMMARY OF SOIL QUALITY DATA
AROMATIC (EPA METHOD 8020) AND HALOGENATED (EPA METHOD 8020)
VOLATILE ORGANIC COMPOUNDS
Calmar-City of Industry
LF 2455
(all values reported in micrograms per kilogram, ug/kg)

Sample ID	Date Sampled	Depth (in feet)	Tetra chloro ethene	Tri chloro ethene	1,1-Di chloro ethene	1,1-Di chloro ethane	1,1,1-Tri chloro ethane	1,2-Di chloro ethane	1,4-Di chloro benzene	Cis-1,2-Di chloro ethene	1,2-Di chloro benzene	Benzene	Toluene	Ethyl-benzene	Total Xylenes
NVP1/LFSB1	04/03/93	5	<1.0	<1.0	<1.0	<1.0	4.2	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/03/93	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/03/93	20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/03/93	30	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/03/93	30.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/03/93	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
NVP2/LFSB2	04/03/93	5.5	5.8	6.2	<1.0	<1.0	10	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/03/93	10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/03/93	22.5	1.5	3.6	3.7	<1.0	12	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/03/93	35.5	<2.0	53	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<5.0	<5.0	<5.0	<5.0
NVP3/LFSB3	04/01/93	5	1.4	<1.0	<1.0	<1.0	2.4	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/01/93	25	8.0	21	11	3.7	17	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/01/93	30	1.7	<1.0	3.5	1.3	6.4	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/01/93	35	<1.0	7.0	2.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
NVP4/LFSB4	03/31/93	10	160	1.1	1.2	<1.0	3.3	2.2	1.2	<1.0	1.1	<5.0	<5.0	<5.0	<5.0
	03/31/93	15	13	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	03/31/93	31	150	<1.0	2.5	<1.0	2.8	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	03/31/93	31.5	61	76	31	<2.0	3.0	<2.0	<2.0	<1.0	<2.0	<5.0	<5.0	<5.0	<5.0
	03/31/93	35	210	29	18	1.6	5.1	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	03/31/93	40	9.1	<1.0	1.1	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0

Table 4 :
SUMMARY OF SOIL QUALITY DATA
AROMATIC (EPA METHOD 8020) AND HALOGENATED (EPA METHOD 8020)
VOLATILE ORGANIC COMPOUNDS
Calmar-City of Industry
LF 2455
(all values reported in micrograms per kilogram, ug/kg)

Sample ID	Date Sampled	Depth (in feet)	Tetra chloro ethene	Tri chloro ethene	1,1-Di chloro ethene	1,1-Di chloro ethane	1,1,1-Tri chloro ethane	1,2-Di chloro ethane	1,4-Di chloro benzene	Cis-1,2-Di chloro ethene	1,2-Di chloro benzene	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW4	04/02/93	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/02/93	15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/02/93	20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/02/93	25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
MW5	04/05/93	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/05/93	15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/05/93	25	<1.0	<1.0	<1.0	<1.0	2.4	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	04/05/93	30	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
MW6	07/19/93	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	07/19/93	10	<1.0	1.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	07/19/93	20	<1.0	5.9	<1.0	<1.0	4.2	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	07/19/93	30	<1.0	280	1.7	<1.0	<1.0	<1.0	<1.0	1.7	<1.0	<5.0	<5.0	<5.0	<5.0
MW6 (comp)	07/19/93	30	<1.0	350	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	07/19/93	35	<1.0	260	<1.0	<1.0	<1.0	<1.0	<1.0	1.9	<1.0	<5.0	<5.0	<5.0	<5.0
MW7	07/20/93	5	4.6	7.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	07/20/93	10	5.2	6.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	07/20/93	20	29	54	28	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<5.0	<5.0	<5.0	<5.0
	07/20/93	25	<1.0	3.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
	07/20/93	30	<1.0	96	91	2.2	<1.0	<1.0	<1.0	3.4	<1.0	<5.0	<5.0	<5.0	<5.0
	07/20/93	35	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0

050994IKG/scj

2455-T15

NOTES: < = Designates less than laboratory detection limit

QA/QC

Table 5 :
SUMMARY OF GROUND-WATER QUALITY DATA
BTEX (EPA Method 8020/602)
and VOCs (EPA Method 8010/601)
Calmar-City of Industry
LF 2455
All values reported in parts per billion (ppb)

Well Number	Sample Name	Date Sampled	PCE	TCE	1,1-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1-TCA	Toluene	Turbidity (NTU)
MW-1		09/01/88	20	23	6.1	ND	TR	ND	6.5	TR	
		04/29/91	34	34	19	ND	2.9	ND	4.5	<1.0	
		10/11/91	32	27	160	ND	2	ND	3	<1.0	
		03/25/92	12	16	4.4	ND	1.7	<0.5	0.9	<1.0	
		04/16/93	18	15	11	<1.0	<1.0	<1.0	2.0	1.7	
	93GWMW012	08/03/93	13	ND	7	ND	ND	<1.0	1.4	<1.0	7.01
	MW-1	11/30/93	12.0	8.0	3.5	<1.0	<1.0	<1.0	1.5	<1.0	15
	MW-1-394	03/28/94	18	9.9	5.2	<1.0	<1.0	<1.0	2.6	NA	10
	GW-1-062194	06/21/94	14	6.2	3.4	<1.0	<1.0	<1.0	1.7	<1.0	6.8
MW-2		09/01/88	7	42	4	ND	1.9	ND	0.77	<1.0	
		04/29/91	11	140	52	5.4	2.2	ND	73	<1.0	
		10/11/91	13	5	2	ND	ND	ND	ND	<1.0	
		03/25/92	7.2	84	20	2.5	2	<1.0	33	<1.0	
		04/15/93	8.2	250	96	20	3.9	<1.0	98	<1.0	
		08/02/93	4.7	110	49	9.2	1.6	<1.0	34	<1.0	5.4
		12/01/93	6.2	200	26	4.2	1.7	<1.0	13	<1.0	18
	MW-2-394	03/29/94	7.3	260	40	6.7	1.9	<1.0	20	NA	9.4
	GW-2-062294	06/22/94	4.2	<5.0	22	4.8	<1.0	<1.0	12	<1.0	17.14
MW-3		09/01/88	47	20	79	36	TR	3.98	2.3	<1.0	
		04/29/91	170	210	27	2.8	ND	ND	5.4	<1.0	
		04/16/93	170	24	71	7.5	<1.0	<1.0	4.2	<1.0	
		08/02/93	160	23	47	9.6	ND	<1.0	2.3	<1.0	5.03
		11/30/93	360	19	17	1.0	<1.0	<1.0	2.5	<1.0	3.56
		11/30/93 (D)	320	19	16	<1.0	<1.0	<1.0	2.5	<1.0	
	MW-3-394	03/29/94	410	17	12	1.1	1.2	<1.0	2.9	NA	2.5
	GW-3-062294	06/22/94	160	11	16	<1.0	<1.0	<1.0	1.6	<1.0	2.08
MW-4		04/16/93	12	4.5	5.4	<1.0	<1.0	<1.0	2.4	<1.0	
		04/23/93	12	4.9	6.3	<1.0	<1.0	<1.0	2.4	<1.0	
	93GWMW042	08/03/93	8.9	3.6	1.9	ND	ND	<1.0	1.2	<1.0	0.35
	MW-4	11/30/93	10	2.7	1.3	<1.0	<1.0	<1.0	1.7	<1.0	15.4
	MW-4-394	03/28/94	16	5.8	2.7	<1.0	<1.0	<1.0	2.8	NA	10.04
		04/23/94	12	4.9	6.3	<1.0	<1.0	<1.0	2.4	<1.0	
	GW-4-062194	06/21/94	10	3.4	3.7	<1.0	<1.0	<1.0	1.2	<1.0	14.97

Table 5 :
SUMMARY OF GROUND-WATER QUALITY DATA
BTEX (EPA Method 8020/602)
and VOCs (EPA Method 8010/601)
Calmar-City of Industry
LF 2455
All values reported in parts per billion (ppb)

Well Number	Sample Name	Date Sampled	PCE	TCE	1,1-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1-TCA	Toluene	Turbidity (NTU)
MW-5		04/16/93	5.0	2.8	2.4	<1.0	<1.0	<1.0	1.8	<1.0	
		04/23/93	5.9	2.2	1.0	<1.0	<1.0	<1.0	1.7	<1.0	
	93GWMW052	08/03/93	3.3	1.7	ND	ND	ND	<1.0	2.4	<1.0	
		12/01/93	4.2	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	13.48
	MW-5-394	03/28/94	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	15.09
		04/23/94	5.9	2.2	1.0	<1.0	<1.0	<1.0	1.7	1.6	
	GW-5-062194	06/21/94	<1.0	<5.0	<1.0	130	<1.0	<1.0	<1.0	<1.0	12.1
MW-6	93GWMW062	08/03/93	4.8	12	2.6	ND	ND	<1.0	2.6	<1.0	
	93GWMW062B	08/10/93	11	110	7.3	<2.0	<2.0	<2.0	<2.0	<1.0	70
	MW-6	11/30/93	5.0	250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.0
	MW-6-394	03/28/94	<1.0	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	NA	9.85
	GW-6-062294	06/22/94	6.3	55	4.5	<1.0	<1.0	<1.0	<1.0	<1.0	6.45
	GW-600-062294	06/22/94 (D)	5.9	48	3.2	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-7	93GWMW072	08/03/93	3.7	16	12	ND	ND	<1.0	3.4	<1.0	
	93GWMW072B	08/10/93	3.9	8.3	7	<1.0	<1.0	<1.0	<1.0	<1.0	3.54
		08/10/93 (D)	3.1	11	13	<1.0	<1.0	<1.0	<1.0	<1.0	
	MW-7	11/30/93	4.9	11	7.7	<1.0	<1.0	<1.0	<1.0	<1.0	2.2
	MW-7-394	03/28/94	6.6	9.9	6.5	<1.0	<1.0	<1.0	1.1	NA	2.47
	GW-7-062294	06/22/94	5.2	7.1	7.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.25
P-1		10/11/91	10	5	12	ND	ND	ND	ND	<1.0	
		03/25/92	13	6.9	41	ND	ND	<1.0	2.4	2	
		04/16/93	18	6.0	55	<1.0	<1.0	<1.0	2.4	<1.0	
		04/16/93 (D)	16	5.7	57	<1.0	<1.0	<1.0	2.1	<1.0	
		08/02/93	14	7.8	49	1.6	ND	<1.0	3.2	<1.0	1.57
		12/01/93	20	7.5	69	<1.0	<1.0	<1.0	2.5	<1.0	1.4
	P-1-394	03/29/94	22	11	90	2.1	<1.0	<1.0	3	NA	9.8
	GW-P1-062294	06/22/94	18	8.4	68	<1.0	<1.0	<1.0	1.7	<1.0	1.98
P-2		05/13/91	20	5.7	ND	ND	ND	ND	ND	<1.0	
		10/11/91	14	7	4	ND	ND	ND	ND	<1.0	
		03/25/92	7.4	7.5	3.9	ND	ND	<1.0	ND	<1.0	
		04/15/93	18	140	58	8.4	12	<1.0	1.1	1.2	1.94
	93GWP022	08/03/93	12	93	ND	8.3	9.4	<1.0	1.1	<1.0	7.56
	P-2	11/30/93	11	210	45	8.3	11	<1.0	<1.0	<1.0	
	P-2-394	03/29/94	70	230	57	8.6	<1.0	<1.0	2.4	NA	13.5
	GW-P2-062194	06/21/94	44	98	47	6.3	<1.0	<1.0	1.3	<1.0	
	GW-P200-062194	06/21/94 (D)	48	91	33	4.4	<1.0	<1.0	1.4	<1.0	16.5

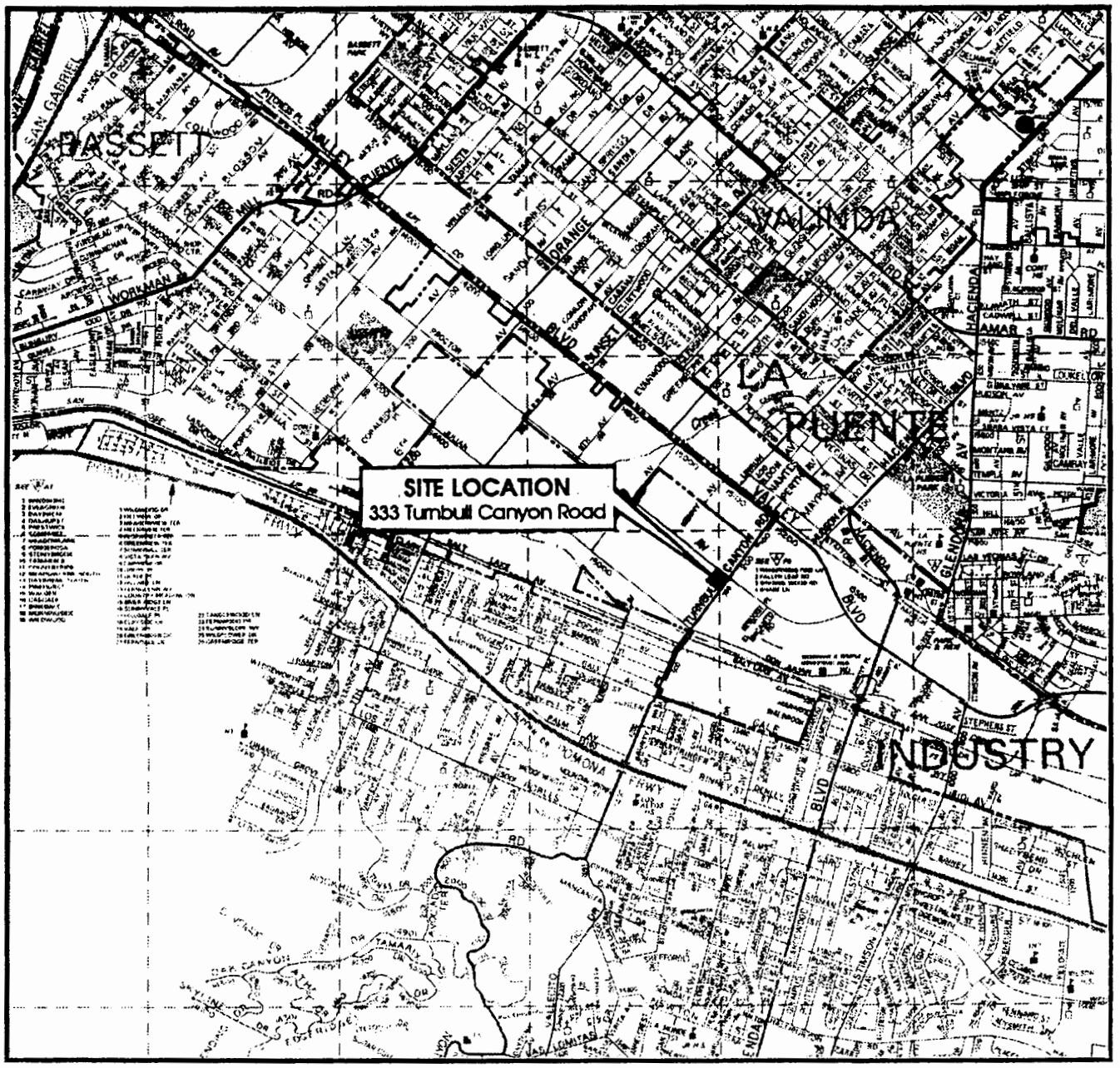
Table 5 :
SUMMARY OF GROUND-WATER QUALITY DATA
BTEX (EPA Method 8020/602)
and VOCs (EPA Method 8010/601)
Calmar-City of Industry
LF 2455
All values reported in parts per billion (ppb)

Well Number	Sample Name	Date Sampled	PCE	TCE	1,1-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1-TCA	Toluene	Turbidity (NTU)
P-3		05/13/91	5.2	2.3	ND	ND	ND	ND	ND	<1.0	
		10/11/91	7	3	ND	ND	ND	ND	ND	2	
		03/25/92	4.9	3.8	1.7	ND	ND	<0.5	0.7	2.7	
		04/15/93 (D)	6.7	4.5	<1.0	<1.0	<1.0	<1.0	2.2	<1.0	
		04/15/93	6.5	4.3	<1.0	<1.0	<1.0	<1.0	2.1	<1.0	
	93GWMW	08/02/93	4	3.2	ND	ND	ND	<1.0	ND	<1.0	1.53
		12/01/93	5.7	4.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.1
	P-3-394	03/28/94	8	4.5	1.1	<1.0	<1.0	<1.0	1.1	<1.0	
		03/28/94 (D)	8	4.7	1.7	<1.0	<1.0	<1.0	1.1	NA	6.56
	GW-P3-062194	06/21/94	5.7	4.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.62
EB-1		11/30/93	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	EB-1-694	06/21/94	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
EB-2		12/01/93	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
LFEB-1		04/15/93	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	
LFEB-2		04/16/93	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	

NOTES: < = Designates less than laboratory detection limit.

ChlFm Chloroform
TCTF Trichlorofluoromethane
PCE Tetrachloroethene
TCE Trichloroethene
1,1-DCE 1,1-Dichloroethene
1,1-DCA 1,1-Dichloroethane
cis-1,2-DCE cis-1,2-Dichloroethene
1,2-DCA 1,2-Dichloroethane
1,1,1-TCA 1,1,1-Trichloroethane
MeCl Methylene Chloride
ND Not Detected (laboratory detection limits unavailable)
TR Trace, below detection limit (per Camp Dresser & McKee Inc.)
NA Not Analyzed
b Compound found in both sample and lab blank
D Duplicate sample

QA/QC



MAP SOURCE: Thomas Bros. Guide, Los Angeles County, California, p. 48,85, 1991.

N

SCALE

0 1/4 1/2 1 MILE

Figure 1 : SITE VICINITY

Project No. 2455.02
Calmar-City of Industry

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2455-05

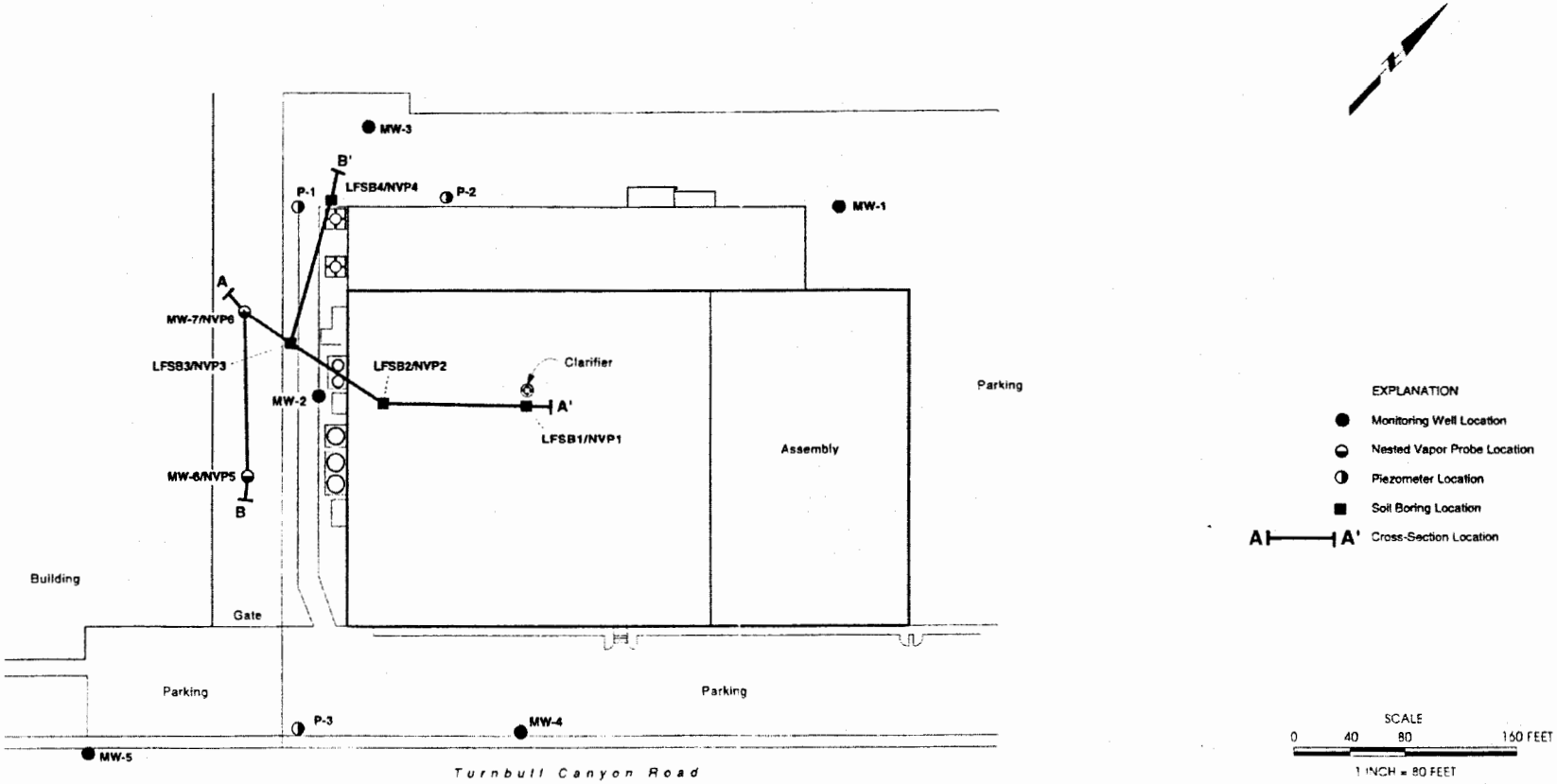

Figure 2 :

SITE PLAN WITH CROSS-SECTION LOCATIONS

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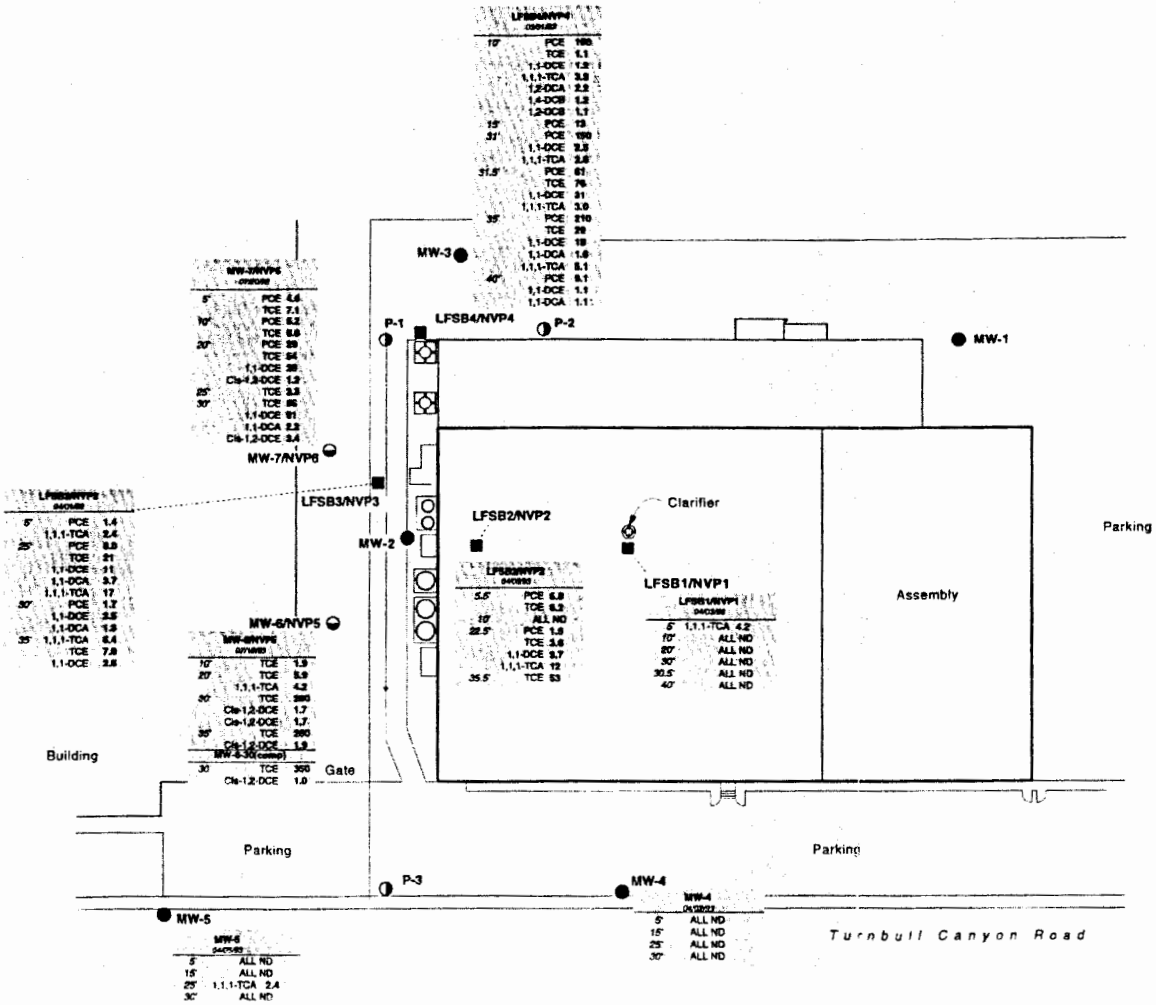

EXPLANATION

- Monitoring Well Location
- Nested Vapor Probe Location
- Piezometer Location
- Soil Boring Location
- Soil Analytical Results: Soil Boring Number, Date Sampled, Depth in Feet, Constituent and Concentration

PCE	Tetrachloroethene
TCE	Trichloroethene
1,1-DCE	1,1-Dichloroethene
1,1-DCA	1,1-Dichloroethane
1,1,1-TCA	1,1,1-Trichloroethane
1,2-DCA	1,2-Dichloroethane
1,4-DCB	1,4-Dichlorobenzene
1,2-DCB	1,2-Dichlorobenzene
Cis-1,2-DCE	Cis-1,2-Dichloroethene
ALL	All Constituents
ND	Not Detectd
(comp)	Comparable Sample

NOTE: All values reported in ug/kg (micrograms per kilogram). Chemicals not listed were all not detected.

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 3 :

SOIL ANALYTICAL RESULTS

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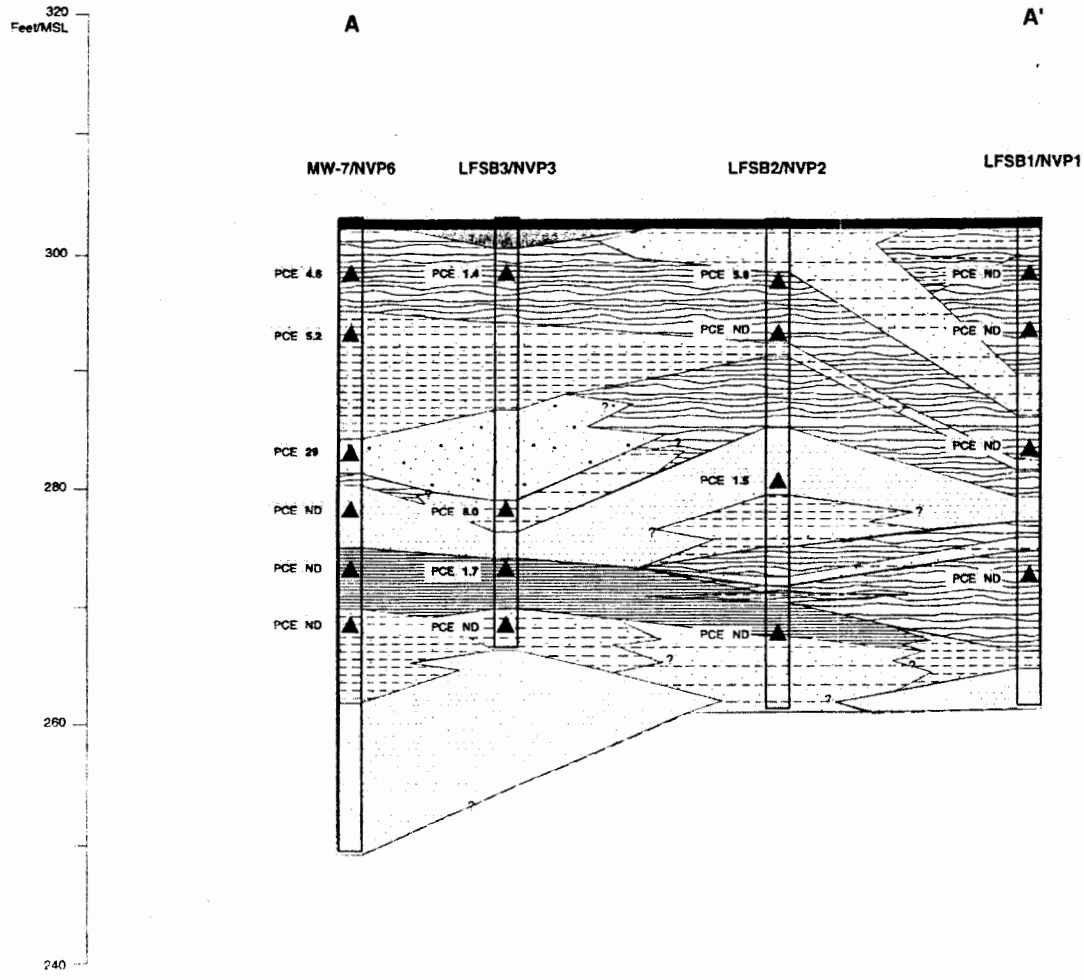

EXPLANATION

- Soil Sample
- PCE 4.6 — Soil Analytical Results for Tetrachloroethylene (PCE) in Soils
- Fill
- Asphalt
- SP
- CH
- SC
- SM
- CL
- ML
- SW

NOTE: Analytical results reported in parts per billion (ppb).

HORIZONTAL SCALE

0 25 50 100 FEET

1 INCH = 50 FEET
VERTICAL SCALE 1" = 10'

Figure 4 :

TETRACHLOROETHYLENE IN SOILS CROSS-SECTION A-A'

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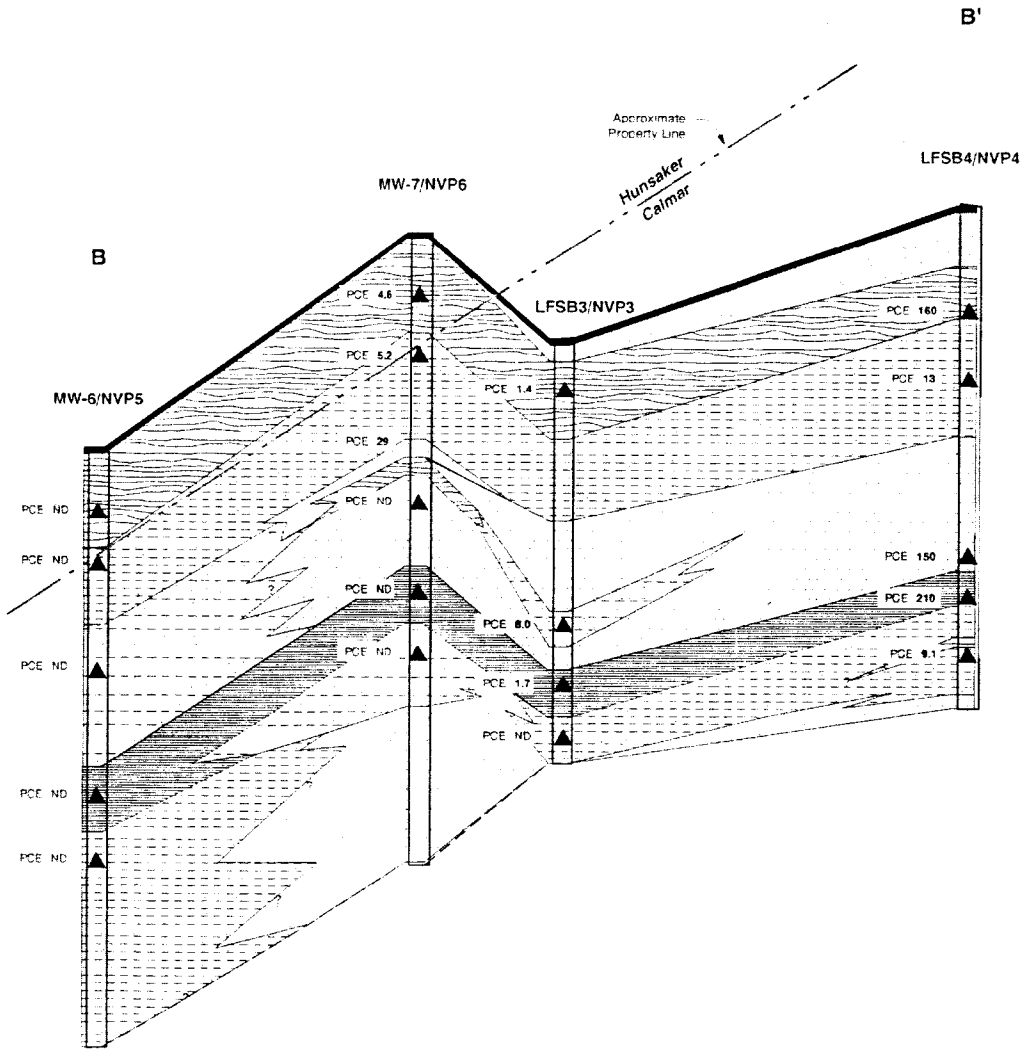

EXPLANATION

▼ Soil Sample

PCE 4.6 Soil Analytical Results for Tetrachloroethylene (PCE) in Soil

Fill

Asphalt

SP

CH

SC

SM

CL

ML

SW

NOTE: Analytical results reported in parts per billion (ppb).

NOT TO HORIZONTAL SCALE

VERTICAL SCALE 1 INCH = 10 FEET

Figure 5 :

TETRACHLOROETHYLENE IN SOIL FENCE DIAGRAM B-B'

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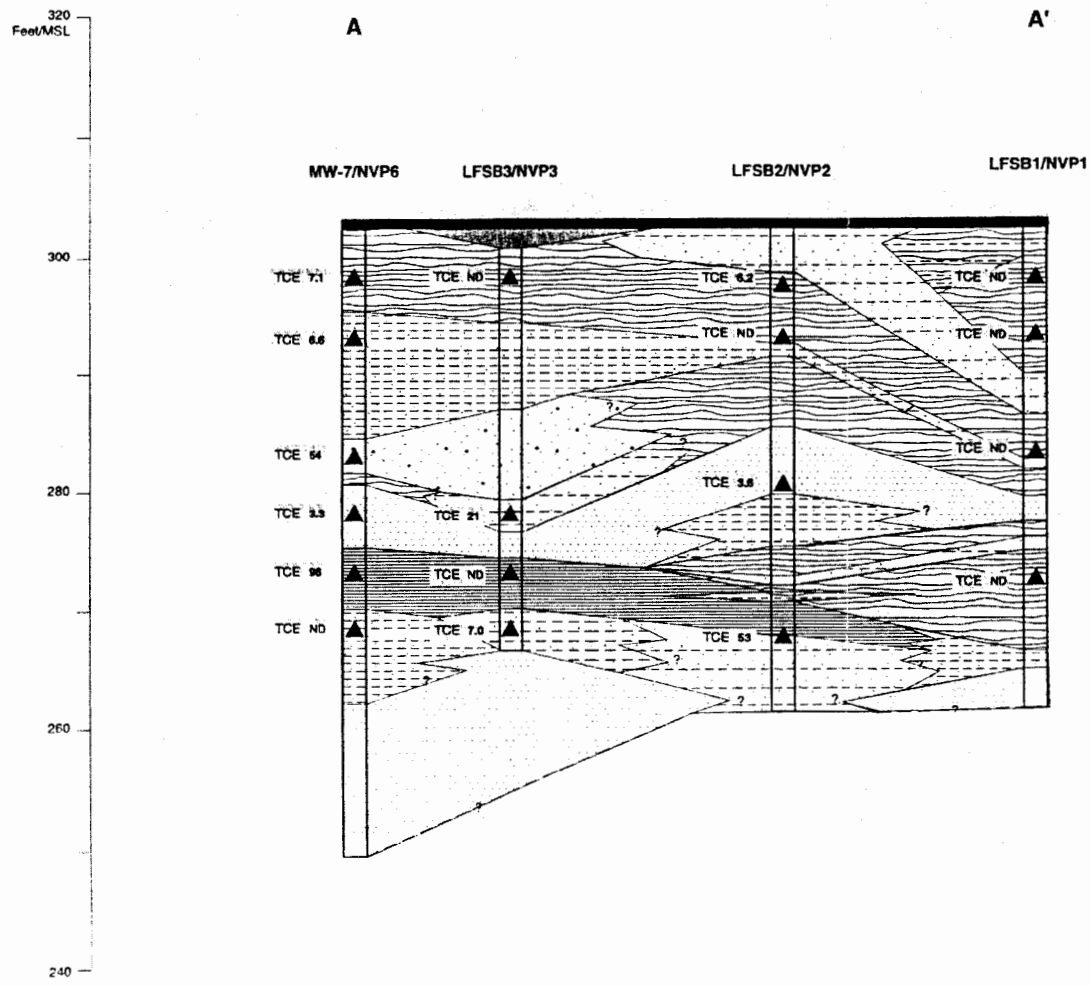

EXPLANATION

- Soil Sample
- TCE 4.8 — Soil Analytical Results for Trichloroethylene (TCE) in Soils
- Fill
- Asphalt
- SP
- CH
- SC
- SM
- CL
- ML
- SW

NOTE: Analytical results reported in parts per billion (ppb).

HORIZONTAL SCALE

0 25 50 100 FEET

1 INCH = 50 FEET
VERTICAL SCALE 1" = 10'

Figure 6 :

TRICHLOROETHYLENE IN SOILS CROSS-SECTION A-A'

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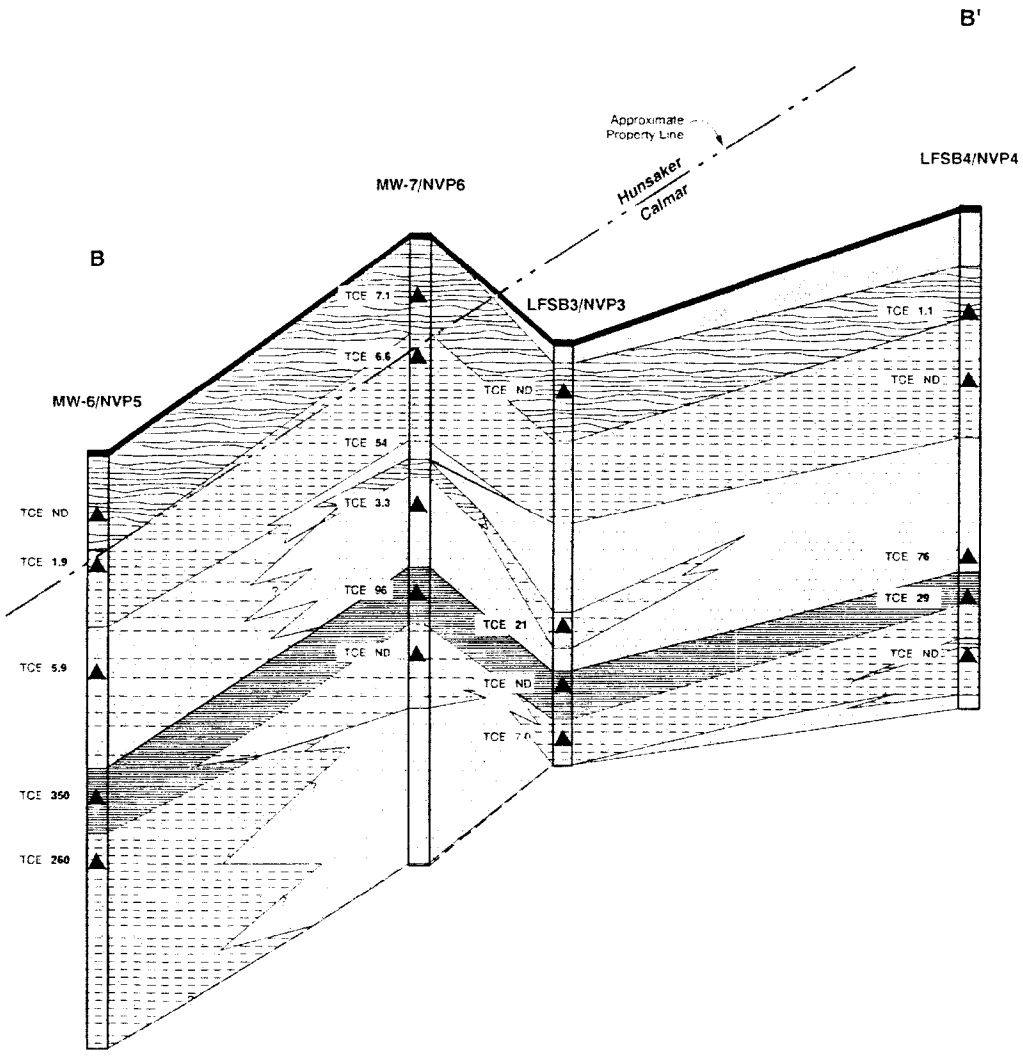

EXPLANATION

▼ Soil Sample

TCE 4.6 Soil Analytical Results for Trichloroethylene (PCE) in Soil

Fill

Asphalt

SP

CH

SC

SM

CL

ML

SW

NOTE: Analytical results reported in parts per billion (ppb).

NOT TO HORIZONTAL SCALE

VERTICAL SCALE: 1 INCH = 10 FEET

Figure 7 :

TRICHLOROETHYLENE IN SOIL FENCE DIAGRAM B-B'

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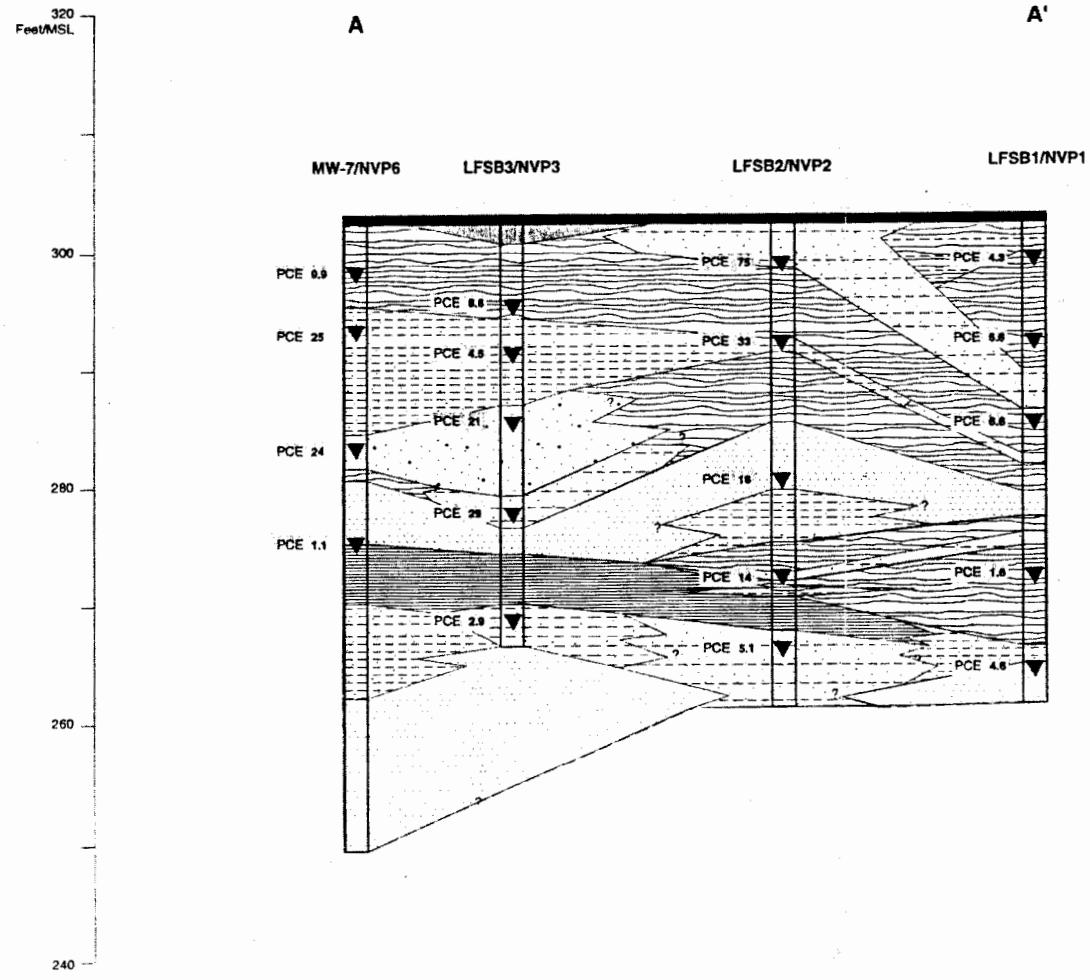

EXPLANATION

- Soil Vapor Sample
- TCE 5.6 — Soil Analytical Results for Tetrachloroethylene (PCE) in Soil Vapor
- Fill
- Asphalt
- SP
- CH
- SC
- SM
- CL
- ML
- SW

NOTE: Analytical results reported in parts per billion by volume (ppbv).

HORIZONTAL SCALE

0 25 50 100 FEET

1 INCH = 50 FEET
VERTICAL SCALE 1" = 10'

Figure 8 :

TETRACHLOROETHYLENE IN SOIL VAPOR CROSS-SECTION A-A'

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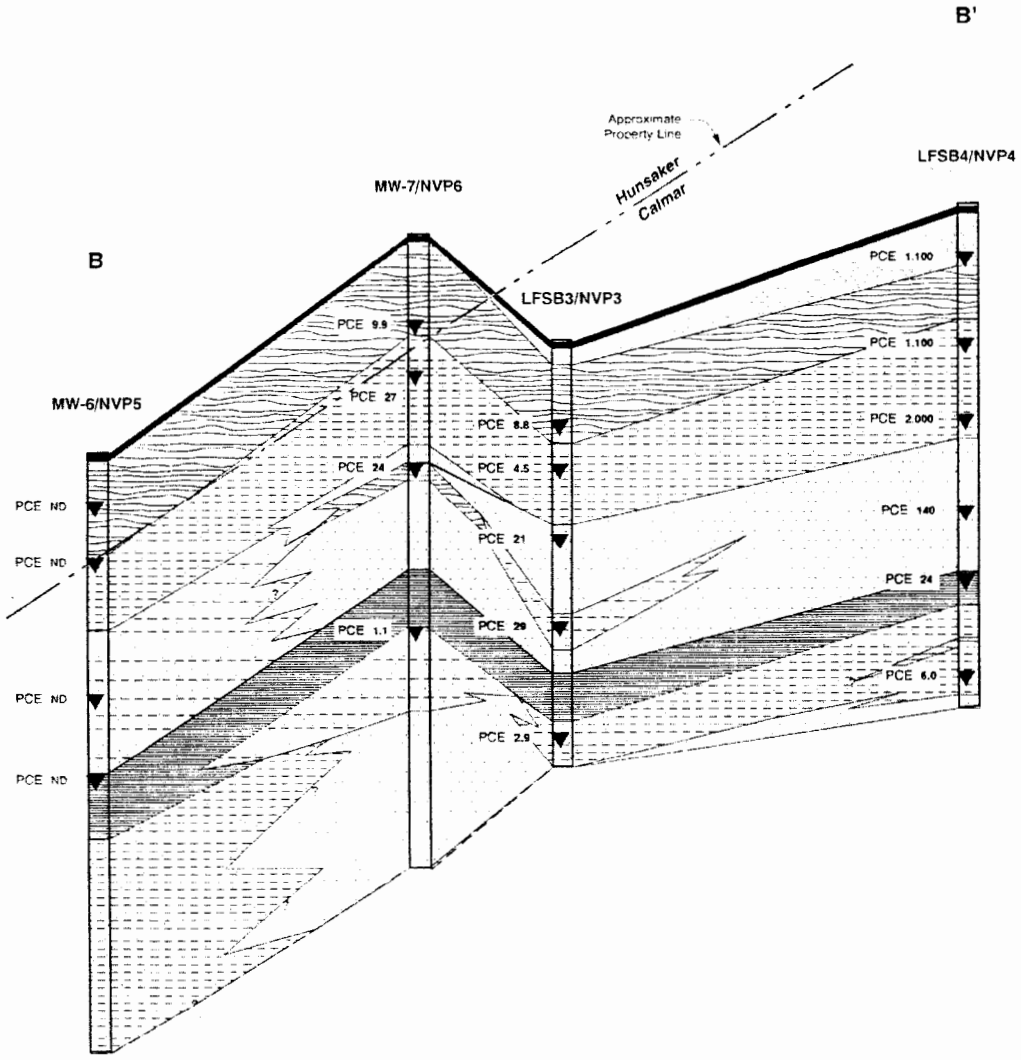

EXPLANATION

▼ Soil Sample

PCE 4.6 Soil Analytical Results for Tetrachloroethylene (PCE) in Soil Vapor

Fill
Asphalt
SP
CH
SC
SM
CL
ML
SW

NOTE: Analytical results reported in parts per billion by volume (ppbv).

NOT TO HORIZONTAL SCALE

VERTICAL SCALE: 1 INCH = 10 FEET

Figure 9 :

TETRACHLOROETHYLENE IN SOIL VAPOR FENCE DIAGRAM B-B'

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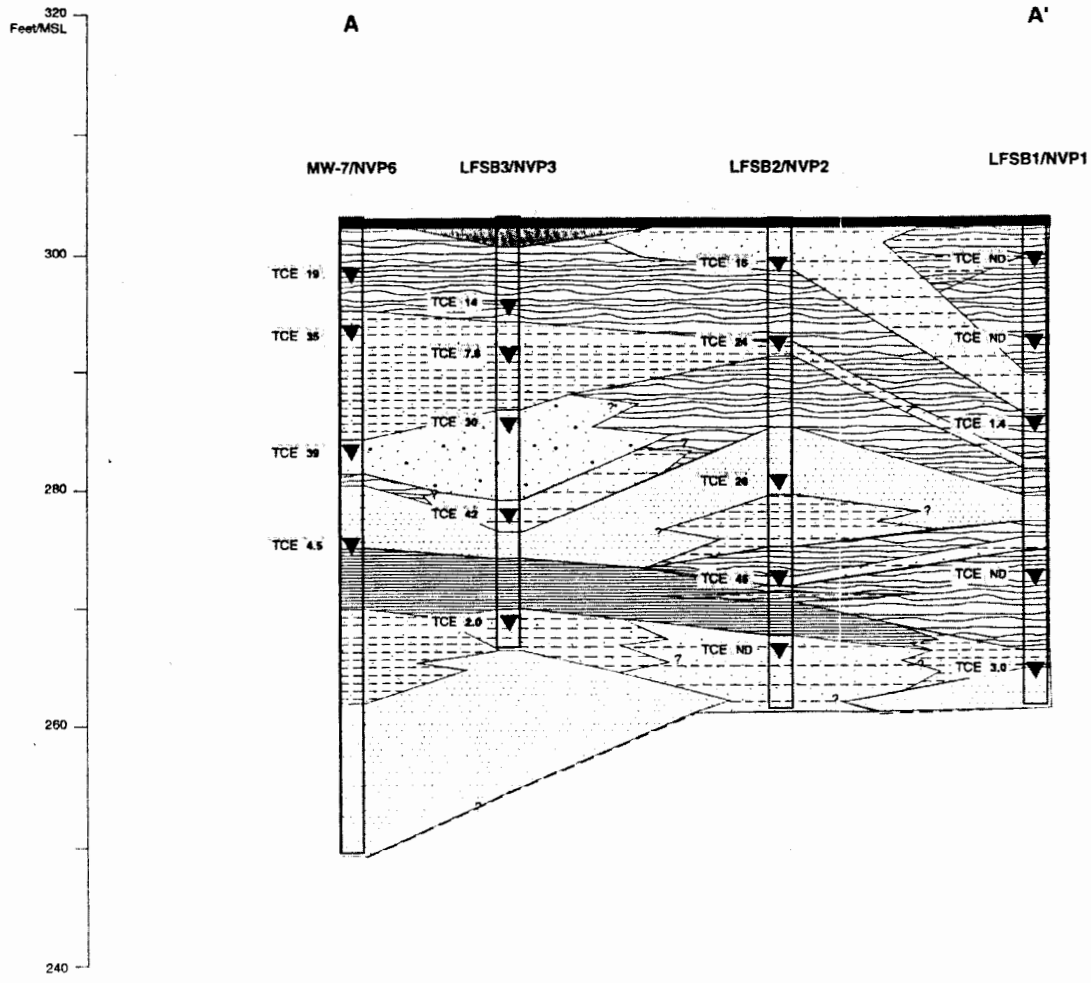

EXPLANATION

- Soil Vapor Sample
- TCE 28 — Soil Analytical Results for Trichloroethylene (TCE) in Soil Vapor
- Fill
- Asphalt
- SP
- CH
- SC
- SM
- CL
- ML
- SW

NOTE: Analytical results reported in parts per billion by volume (ppbv).

HORIZONTAL SCALE

0 25 50 100 FEET

1 INCH = 50 FEET
VERTICAL SCALE 1" = 10'

Figure 10 :

TRICHLOROETHYLENE IN SOIL VAPOR CROSS-SECTION A-A'

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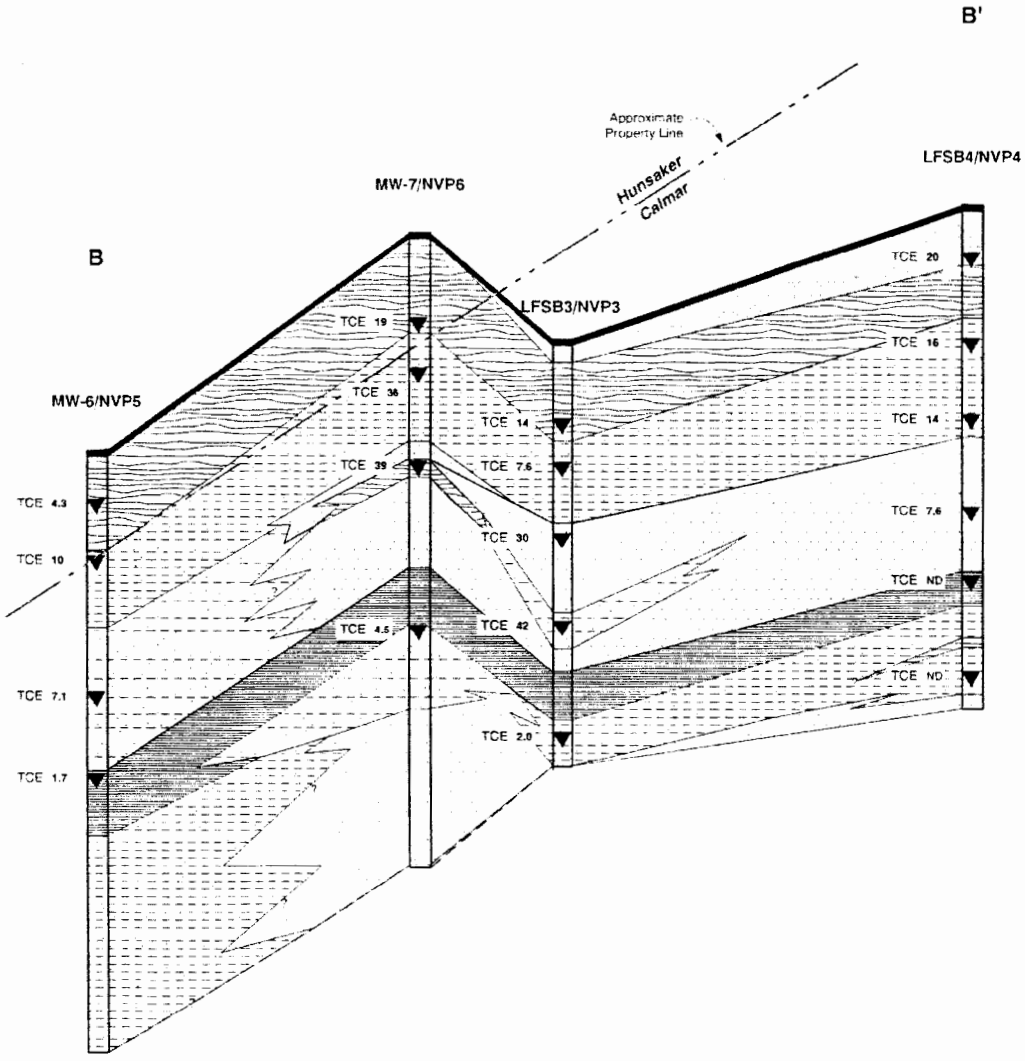

EXPLANATION

▼ Soil Sample

TCE 4.6 Soil Analytical Results for Trichloroethylene (TCE) in Soil Vapor

Fill

Asphalt

SP

CH

SC

SM

CL

ML

SW

NOTE Analytical results reported in parts per billion by volume (ppbv).

NOT TO HORIZONTAL SCALE

VERTICAL SCALE 1 INCH = 10 FEET

Figure 11 :

TRICHLOROETHYLENE IN SOIL VAPOR
FENCE DIAGRAM B-B'

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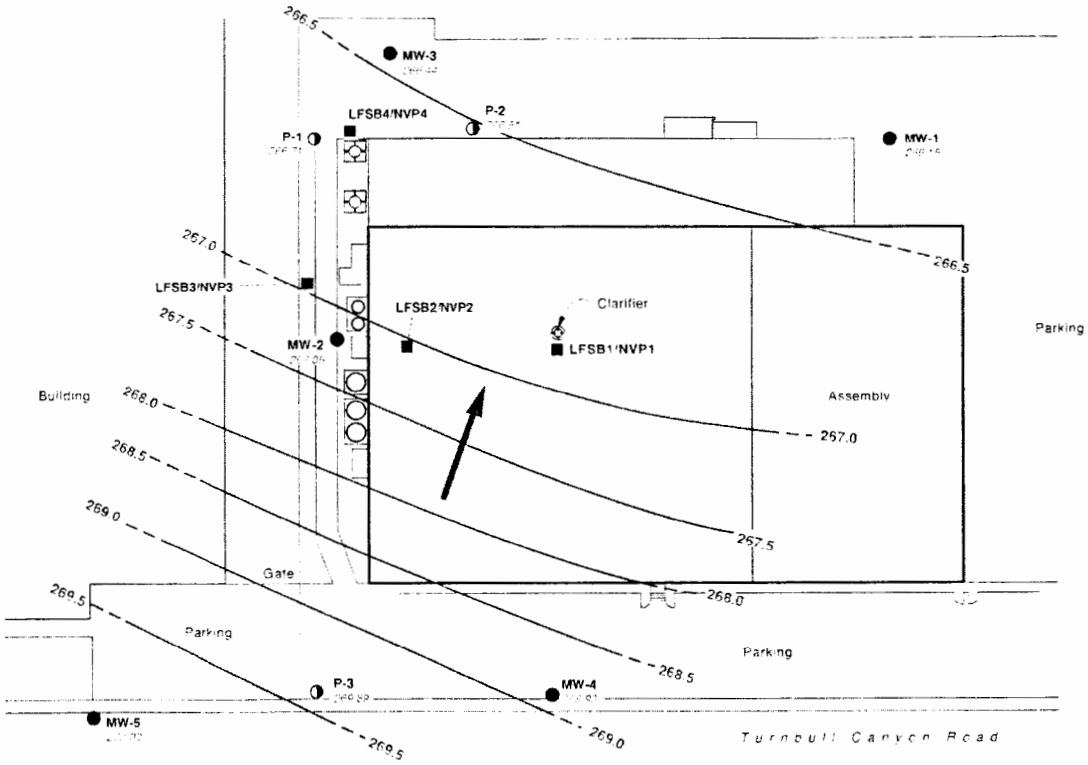

EXPLANATION

- Monitoring Well Location
- Nested Vapor Probe Location
- Piezometer Location
- Soil Boring Location
- Ground-Water Elevation Contour (ft.-MSL)
- 268.44 Ground-Water Elevation (ft.-MSL)
- Approximate Horizontal Ground-Water Flow Direction

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 12 :

GROUND-WATER ELEVATION CONTOURS MEASURED APRIL 15, 1993

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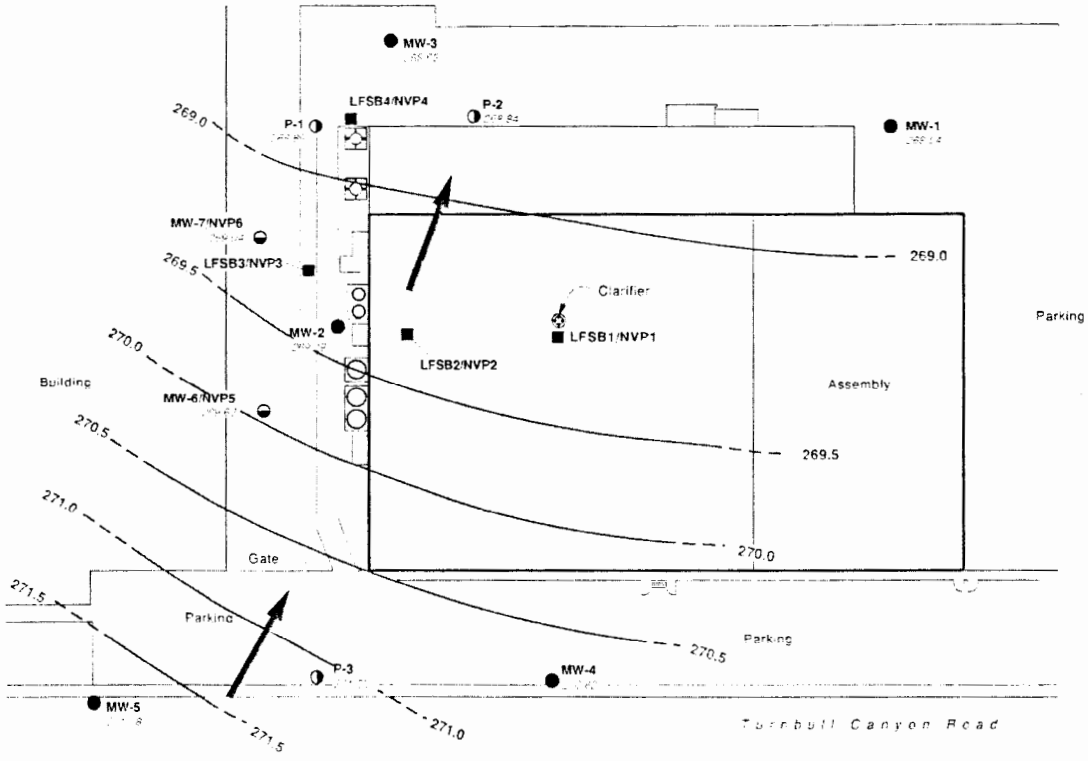

EXPLANATION

- Monitoring Well Location
- Nested Vapor Probe Location
- Piezometer Location
- Soil Boring Location
- Ground-Water Elevation Contour (ft.-MSL)
- 269.54 Ground-Water Elevation (ft.-MSL)
- Approximate Horizontal Ground-Water Flow Direction

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 13 :

GROUND-WATER ELEVATION CONTOURS MEASURED JULY 30, 1993

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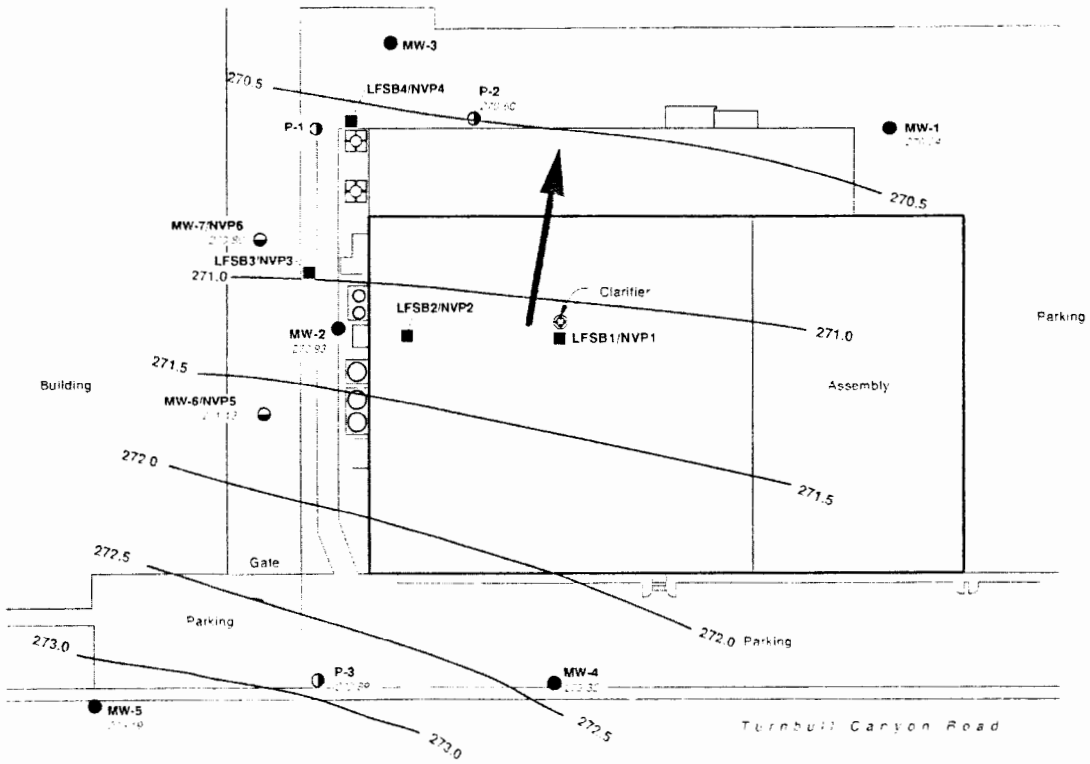

EXPLANATION

- Monitoring Well Location
- Nested Vapor Probe Location
- Piezometer Location
- Soil Boring Location
- Ground-Water Elevation Contour (ft.-MSL)
- Ground-Water Elevation (ft.-MSL)
- Approximate Horizontal Ground-Water Flow Direction

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 14 :

GROUND-WATER ELEVATION CONTOURS
MEASURED NOVEMBER 30, 1993

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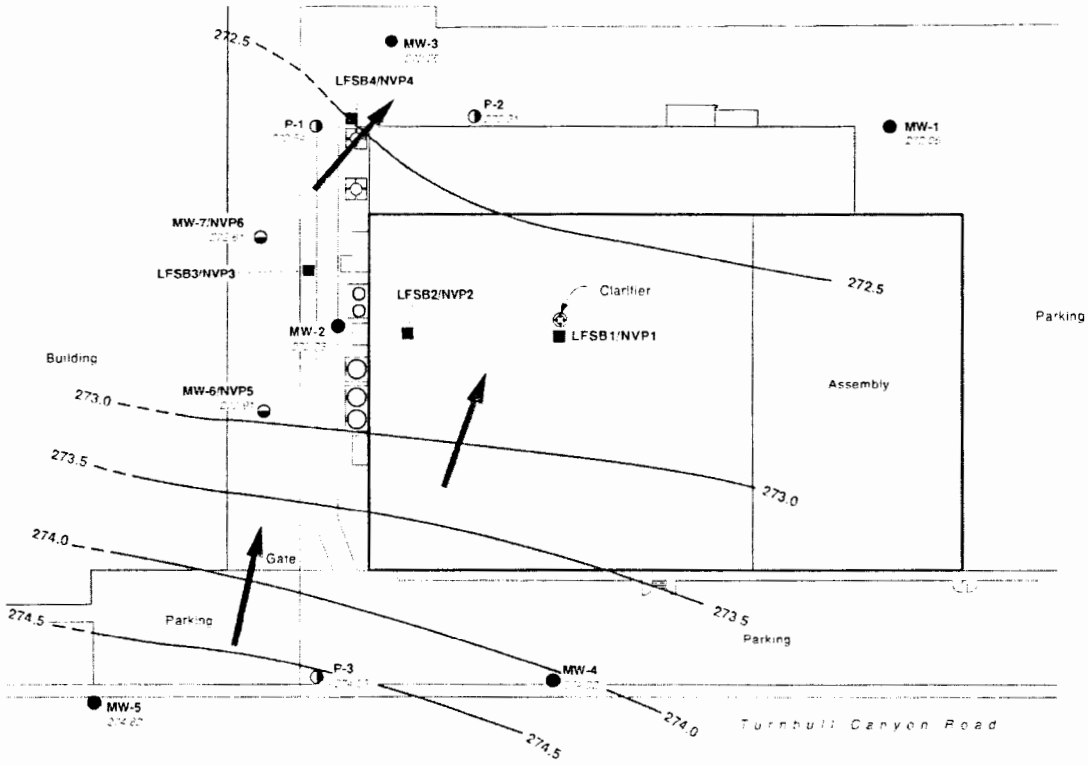

EXPLANATION

- Monitoring Well Location
- Nested Vapor Probe Location
- Piezometer Location
- Soil Boring Location
- Ground-Water Elevation Contour (ft.-MSL)
- Ground-Water Elevation (ft.-MSL)
- Approximate Horizontal Ground-Water Flow Direction

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 15 :

GROUND-WATER ELEVATION CONTOURS
MEASURED APRIL 28, 1994

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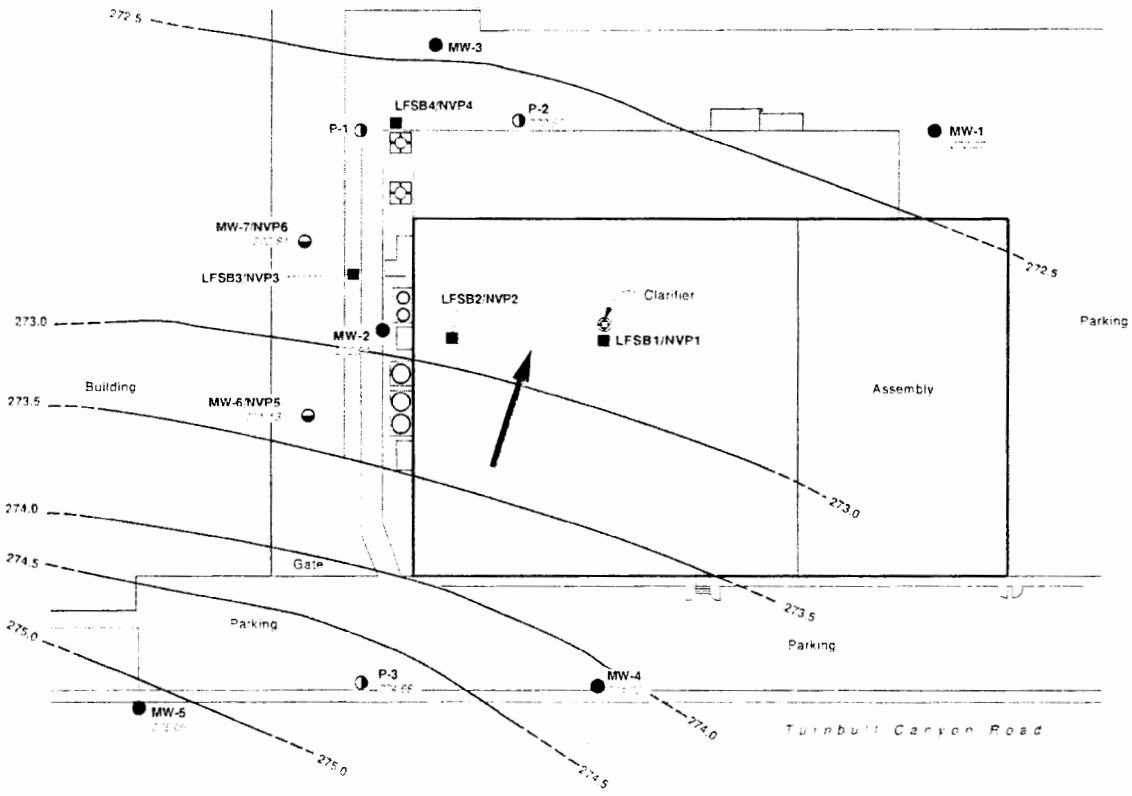

EXPLANATION

- Monitoring Well Location
- Nested Vapor Probe Location
- Piezometer Location
- Soil Boring Location
- Ground-Water Elevation Contour (ft.-MSL)
- Ground-Water Elevation (ft.-MSL)
- Approximate Horizontal Ground-Water Flow Direction

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 16 :

GROUND-WATER ELEVATION CONTOURS
MEASURED JUNE 27, 1994

Project No. 2455
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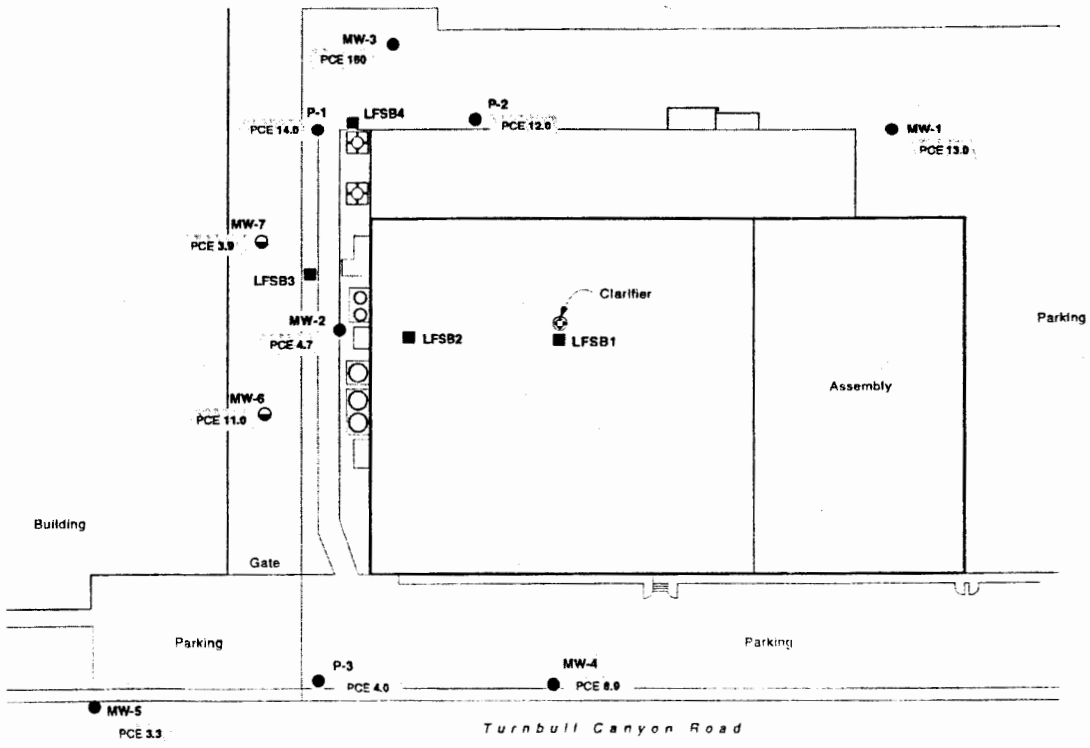

EXPLANATION

- Monitoring Well Location
- Monitoring Well/Nested Vapor Probe Location
- Soil Boring with Nested Vapor Probe Location
- PCE 5.8 — Soil Analytical Results for Tetrachloroethylene (PCE) in Soil Vapor

NOTE: Analytical results reported in parts per billion (ppb).

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 17A :

PCE In Ground Water - August, 1993

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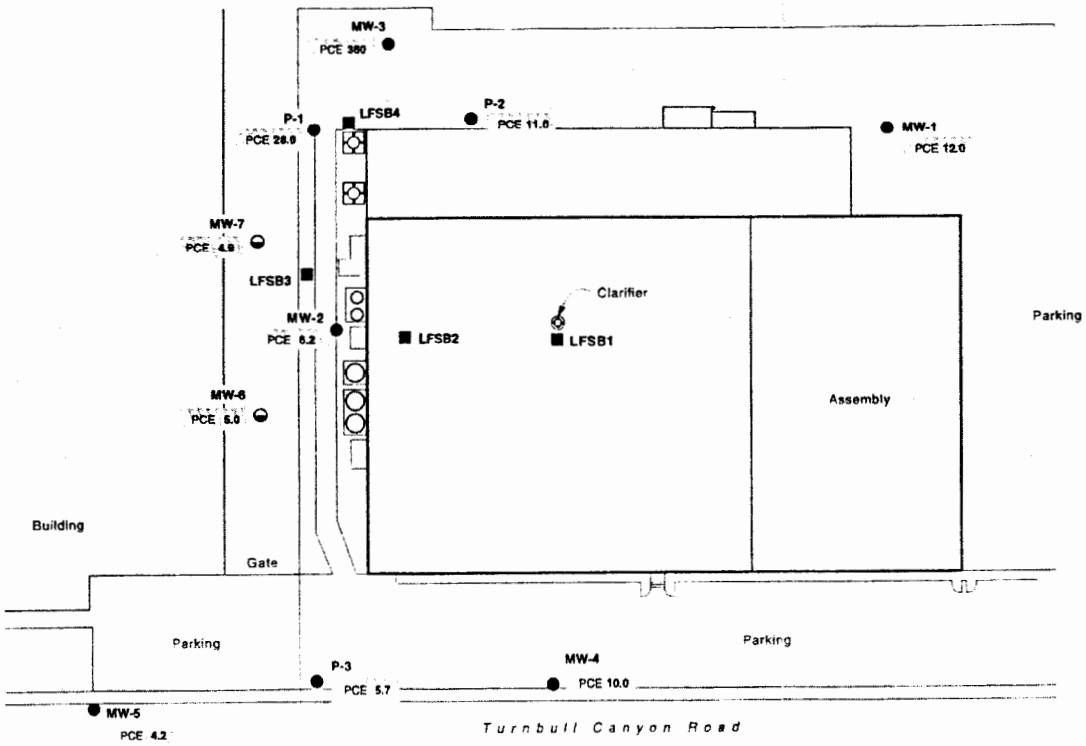

EXPLANATION

- ● Monitoring Well Location
- ◒ Monitoring Well/Nested Vapor Probe Location
- ■ Soil Boring with Nested Vapor Probe Location
- PCE 5.6 Soil Analytical Results for Tetrachloroethylene (PCE) in Soil Vapor

NOTE: Analytical results reported in parts per billion (ppb).

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 17B :

PCE in Ground Water - December, 1993

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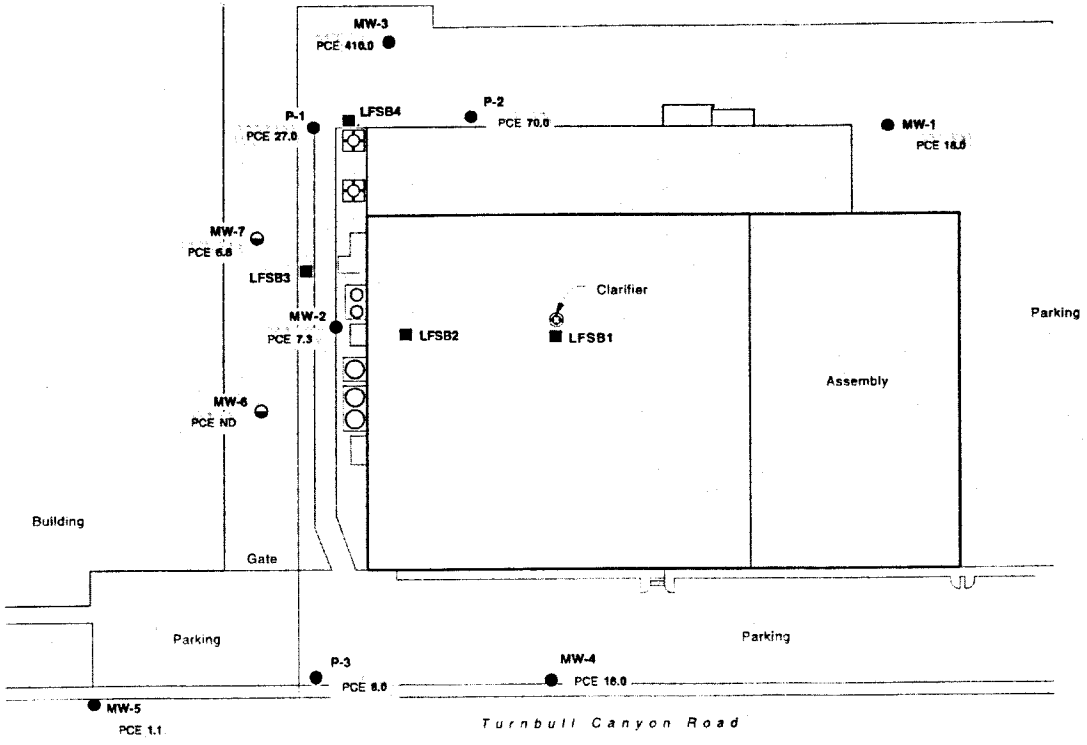

EXPLANATION

- ● Monitoring Well Location
- ◒ Monitoring Well/Nested Vapor Probe Location
- ■ Soil Boring with Nested Vapor Probe Location
- PCE 5.8 Soil Analytical Results for Tetrachloroethylene (PCE) in Soil Vapor

NOTE: Analytical results reported in parts per billion (ppb).

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 17C :

PCE in Ground Water - March, 1994

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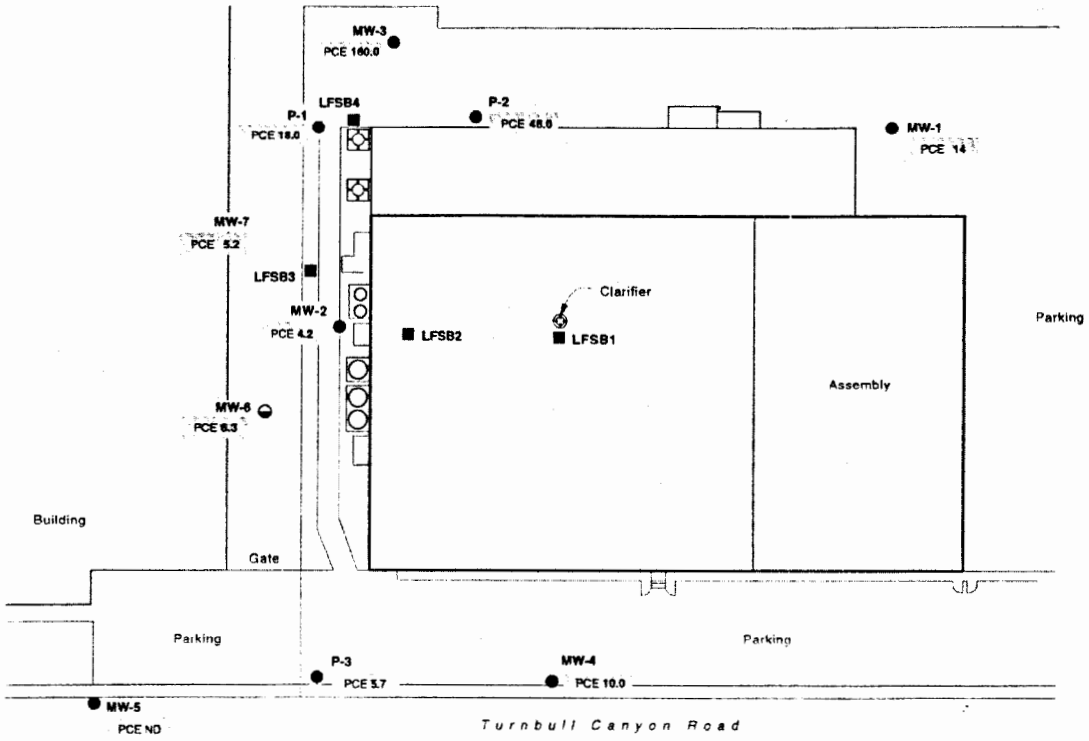

EXPLANATION

- ● Monitoring Well Location
- ◒ Monitoring Well/Nested Vapor Probe Location
- ■ Soil Boring with Nested Vapor Probe Location
- PCE 5.0 Soil Analytical Results for Tetrachloroethylene (PCE) in Soil Vapor

NOTE: Analytical results reported in parts per billion (ppb).

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 17D :

PCE In Ground Water - June, 1994

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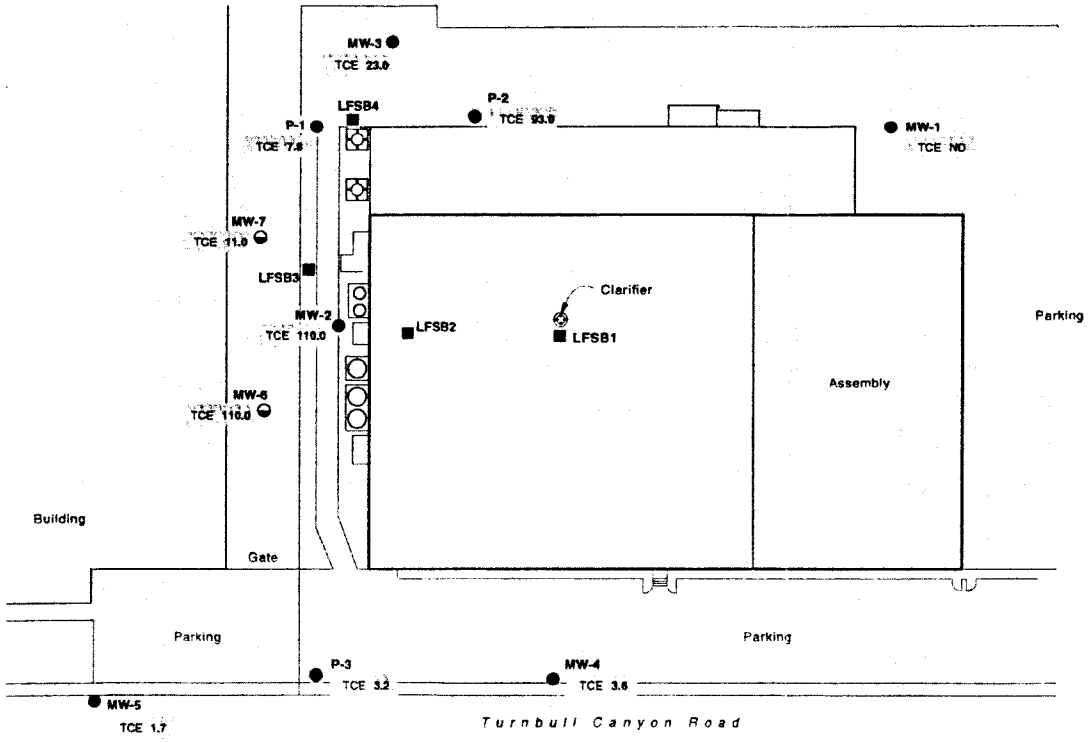

EXPLANATION

- Monitoring Well Location
- Monitoring Well Nested Vapor Probe Location
- Soil Boring with Nested Vapor Probe Location
- TCE 5.6 — Soil Analytical Results for Trichloroethylene (TCE) in Soil Vapor

NOTE: Analytical results reported in parts per billion (ppb).

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 18A :

TCE in Ground Water - August, 1993

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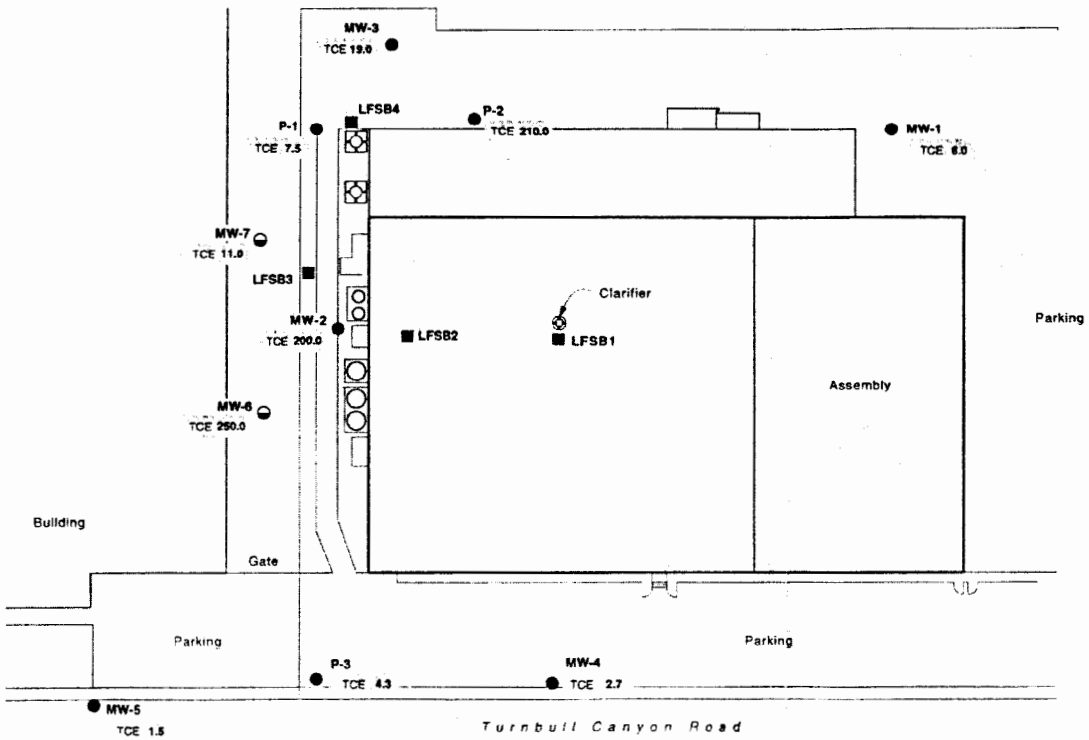

EXPLANATION

- Monitoring Well Location
- Monitoring Well/Nested Vapor Probe Location
- Soil Boring with Nested Vapor Probe Location
- TCE 5.6 — Soil Analytical Results for Trichloroethylene (TCE) in Soil Vapor

NOTE: Analytical results reported in parts per billion (ppb).

SCALE
0 40 80 160 FEET
1 INCH = 80 FEET

Figure 18B :

TCE in Ground Water - December 1993

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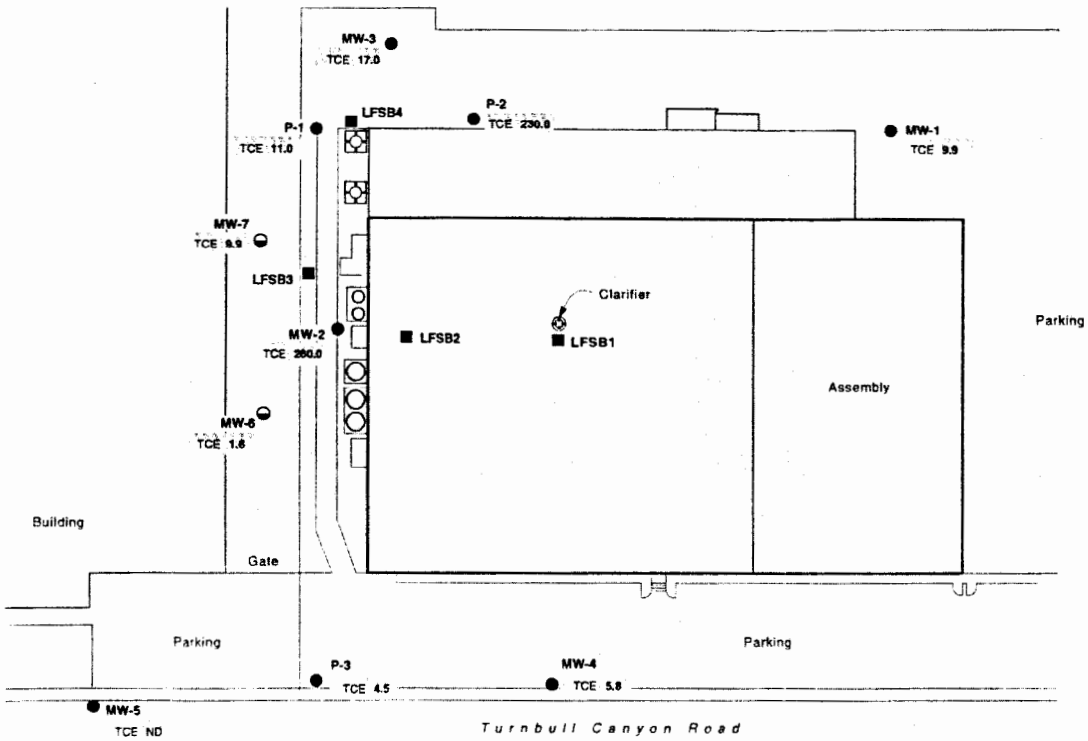

EXPLANATION

- ● Monitoring Well Location
- ◒ Monitoring Well/Nested Vapor Probe Location
- ■ Soil Boring with Nested Vapor Probe Location
- TCE 6.8 Soil Analytical Results for Trichloroethylene (TCE) in Soil Vapor

NOTE: Analytical results reported in parts per billion (ppb).

SCALE

0 40 80 160 FEET

1 INCH = 80 FEET

Figure 18C :

TCE In Ground Water - March, 1994

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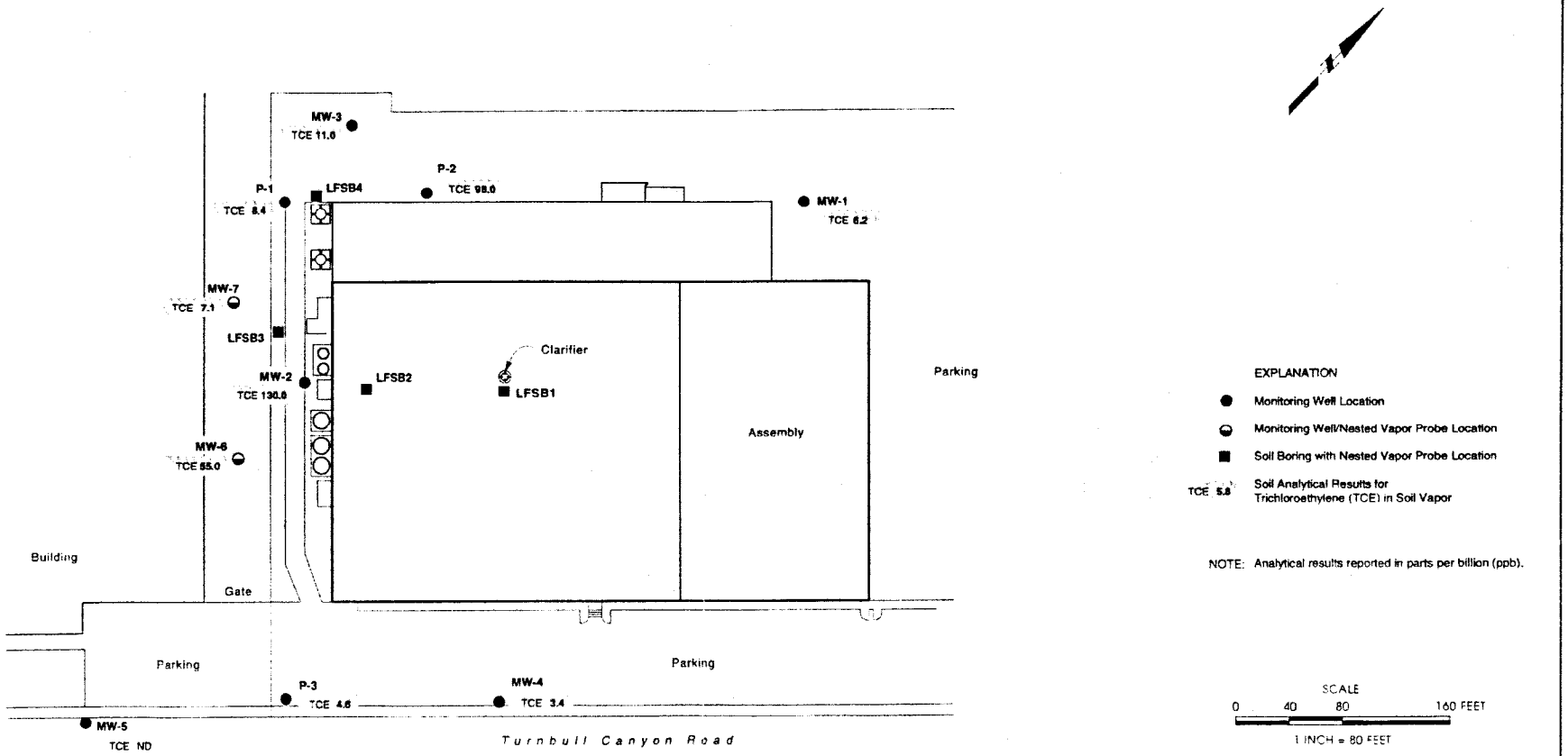

Figure 18D :

TCE in Ground Water - June, 1994

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APPENDIX A

Monitoring Well Construction Details and Soil Boring Logs

WELL CONSTRUCTION		LITHOLOGY	SAMPLING DATA	
Depth, feet	Graphic Log	Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
		CEMENT		
		CLAYEY GRAVELLY SAND (SC), yellowish brown (10YR-5/4), moist, moderate plasticity, fine to medium sand, with scattered cobbles and some clay.		
5		SILTY CLAY (CL), black (2.5Y-N2), moist, plastic, clay with some silt.	5	
		-slightly moist, trace fine sand	LFSB1-5	0.4
10		SANDY CLAY (CL), dark olive brown (2.5Y-3/3), slightly moist, slight plasticity, clay with fine sand, irregular white mottling, grades to clay with some silt, moderate plasticity.	10	
			LFSB1-10	0.2
15		SILTY SAND (SM), olive brown (2.5Y-4/3), slightly moist, very fine to fine grained sand, with some silt.	15	0.2
		SILTY CLAY (CL), dark olive brown (7.5Y-4/3), moist, plastic, clay with some silt and trace very fine grained sand, irregular rust orange mottling.		
20			20	
		SAND (SM), light olive brown (2.5Y-5/4), moist, very fine to fine grained sand with some silt, rust-orange mottling.	LFSB1-20	0.2
		SILTY CLAY (CL), dark olive brown (2.5Y-3/3), moist, plastic, clay with some silt and trace very fine grained sand.		0.2
25		SAND (SW), olive brown (2.5Y-3/2), moist, fine to coarse grained sand.	25	
		SILTY CLAY (CL), very dark grayish brown, (2.5Y-4/2), moist, plastic, clay with silt, trace very fine grained sand.		0.0
		SILTY SAND (SM), dark grayish brown, (2.5Y-4/2), moist, very fine to fine grained sand with some silt.	LFSB1-30	0.0
30		SANDY CLAY (CL), very dark gray (2.5Y-N3), moist, moderate plasticity, clay with sand, scattered pieces of black carbon.	30	
			LFSB1-30.5	0.0
35			35	

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled
- Sample Retained

Well casing elevation:

Date well drilled: 04/03/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: Jeff 4629

WELL CONSTRUCTION AND LITHOLOGY FOR NESTED VAPOR PROBE NVP1 AND SOIL BORING LFSB-1

Project No. 2455
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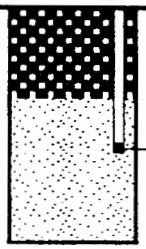
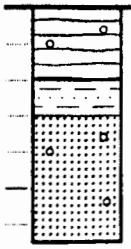
WELL CONSTRUCTION		LITHOLOGY		SAMPLING DATA	
Depth, feet	Continued	Graphic Log	Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
			-black (2.5Y-N2), very moist, very plastic, trace silt		0.8
			SANDY SILT (ML), very dark gray (2.5Y-N3), moist, silt with very fine to fine grained sand.		0.7
40	PROBE #5		SAND (SW), light olive brown (2.5Y-5/3), moist, fine to coarse grained sand with scattered cobbles, poor return in sampler.	40 LFS81-40	0.0

Bottom of boring at 41.5 feet.
NOTE:
Nested vapor probes (NVP) constructed with 1/4" teflon tubing (TYP 5) and a stainless steel perforated tip.

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled
- Sample Retained

Well casing elevation:

Date well drilled: 04/03/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: Jeff 4629

WELL CONSTRUCTION AND LITHOLOGY FOR NESTED VAPOR PROBE NVP1 AND SOIL BORING LFSB-1 (CONTINUED)

Project No. 2455
Calmar

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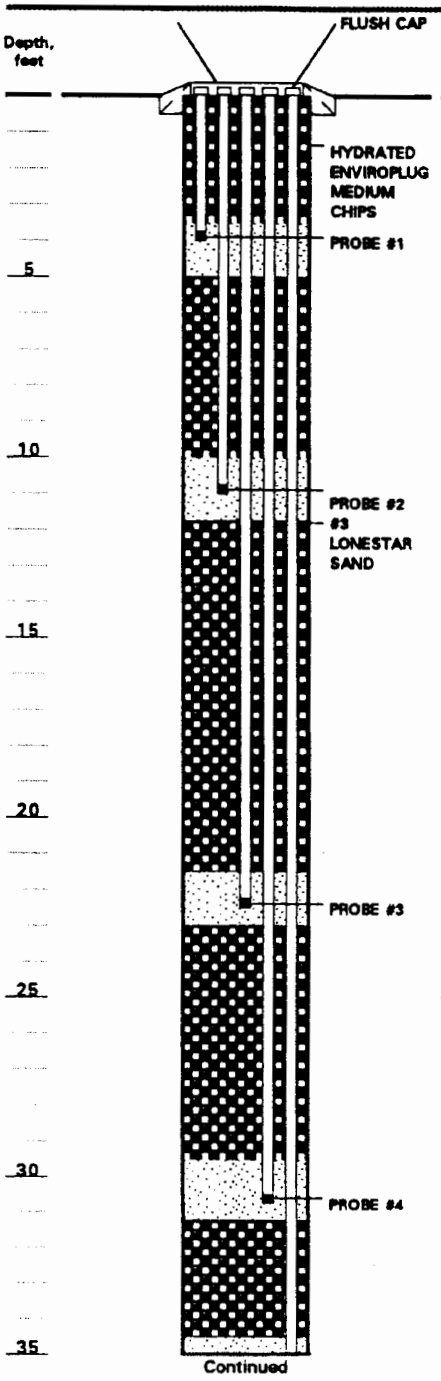
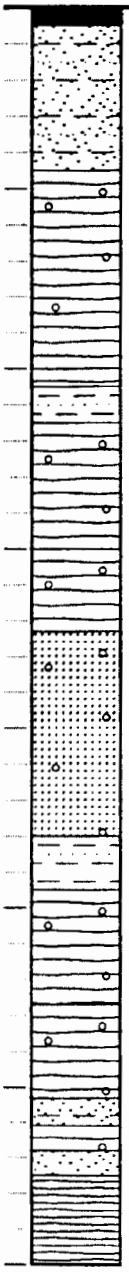
WELL CONSTRUCTION	LITHOLOGY	SAMPLING DATA





Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
CONCRETE FLOORING		
SILTY SAND (SM), yellowish brown (10YR-5/4), moist, some silt, fine grained sand, weakly plastic, trace clay occurring in blobs, black (2.5Y-2/0), highly plastic, angular moist, trace coarse gravel, angular fill material (?), sharp contact.		
SILTY SANDY CLAY (CL), yellowish brown (10YR-5/4), moist, mostly clay, some fine grained sand, trace fine gravel, weakly plastic.	LFSB2-5.5	ND
SILTY CLAY (CL), black (2.5Y-2/0), moist, some silt, trace fine grained sand, weakly plastic, gradual lower contact.	LFSB2-10	ND
CLAYEY SILT (ML), yellowish brown (10YR-5/4), moist, few clay, weakly plastic, sharp lower contact.		
SILTY CLAY (CL), black (2.5Y-2/0), moist, some silt, trace fine grained sand, trace gravel, weakly plastic; trace blebs of light brown silt with few fine grained sand, 3-5mm diameter; gradual lower contact.		ND
SANDY SILTY CLAY (CL), dark brown (10YR-2/1), to black (10YR-3/3), little silt, few fine grained sand, moderately plastic, gradual lower contact.		ND
SAND (SW), yellowish brown, dry, trace silt, moderately well graded, fine grained sand, non-plastic.		
-light yellowish brown		NA
CLAYEY SILT (ML), light yellowish brown (10YR-3/3), moist, little clay, trace fine grained sand, weakly plastic.	LFSB2-22.5	NA
SANDY CLAY (CL), dark brown (10YR-3/3) to black (10YR-2/1), moist, some medium grained sand, trace fine grained sand, trace silt, sand/silt occurring on small interbeds 3-10mm wide, highly plastic, gradual lower contact.		NA
SILTY CLAY (CL), black (10YR-2/1), some silt, trace sand in upper 0.25', moist, moderate to highly plastic.		
-wet		
SILTY SAND (SM), grayish brown (10YR-5/2) to olive (2.5Y-4/3), wet, some silt, trace clay, fine grained sand, weakly plastic in upper 0.25' becoming non-plastic at 30', gradual lower contact.		NA
SILTY CLAY (CL), black (10YR-2/1), wet, moderately plastic, sharp lower contact.		
CLAYEY SAND (SC), yellowish brown (10YR-5/4), wet, little clay, medium grained sand, well sorted,		

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Well casing elevation:

Date well drilled: 04/03/93 -

L• F Geologist/Engineer: I.K. Goltz

Approved by: def 4629

WELL CONSTRUCTION AND LITHOLOGY FOR NESTED VAPOR PROBE NVP2 AND SOIL BORING LFSB-2

Project No. 2455
Calmar

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WELL CONSTRUCTION		LITHOLOGY	SAMPLING DATA	
Depth, feet	Graphic Log	Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
Continued		weakly plastic, sharp lower contact.		
	PROBE #5	SILTY CLAY (CH), black (10YR-2/0), wet, some silt, highly plastic, sharp lower contact, silt tending to occur in blebs.	LFSB2-35.5	NA
		SILTY SAND (SM), black (10YR-2/0), wet, little trace clay, fine grained sand, weak to non-plastic, well sorted.		
40			40	
		Bottom of boring at 41.5 feet.		NA = Not Analyzed
		NOTE: Saturated soils at 29.5' below ground surface. Drilling method did not include blow during sampling. Nested vapor probes (NVP) constructed with 1/4" teflon tubing (TYP 5) and a stainless steel perforated tip.		ND = Not Detected

Well casing elevation:

Date well drilled: 04/03/93 -

L• F Geologist/Engineer: I.K. Goltz

Approved by: def 4629

EXPLANATION

Clay

Silt

Sand

Gravel

Interval Sampled

Sample Retained

WELL CONSTRUCTION AND LITHOLOGY FOR NESTED VAPOR PROBE NVP2 AND SOIL BORING LFSB-2 (CONTINUED)

Project No. 2455
Calmar

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WELL CONSTRUCTION		LITHOLOGY	SAMPLING DATA	
Depth, feet	Continued	Graphic Log	Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
			LFSB3-35	0.5/33
			Bottom of boring at 36.5 feet. NOTE: Nested vapor probes (NVP) constructed with 1/4" teflon tubing (TYP 5) and a stainless steel perforated tip.		NA = Not Analyzed ND = Not Detected

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Well casing elevation:

Date well drilled: 04/01/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: dlf 4629

WELL CONSTRUCTION AND LITHOLOGY FOR NESTED VAPOR PROBE NVP3 AND SOIL BORING LFSB-3 (CONTINUED)

Project No. 2455
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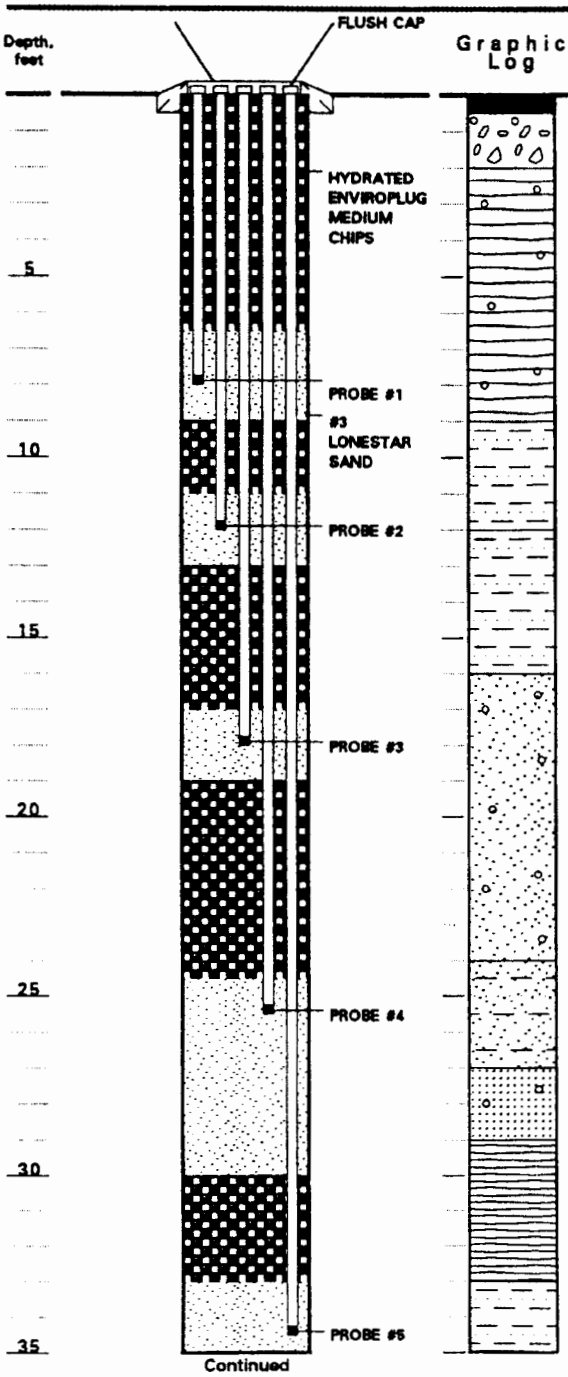
WELL CONSTRUCTION



LITHOLOGY

Graphic Log	Visual Description
	CONCRETE
	AGGREGATE BASE, crushed rock with sand.
	SILTY CLAY (CL), olive brown (2.5Y-4/3), moist, very stiff, moderate plasticity, clay with silt and trace fine grained sand, irregular white mottling.
	-very dark gray brown (2.5Y-3/2), clay with silt
	SANDY CLAYEY SILT (ML), olive brown (2.5Y-4/4), moist, very stiff, silt with clay and very fine grained sand.
	CLAYEY SAND (SC), olive brown (2.5Y-4/3), moist, moderately dense, medium to fine grained sand with some clay.
	SAND (SP), yellowish brown (10YR-5/4), slightly moist, moderately dense, fine grained sand with trace silt, some rust orange mottling.
	-grades to well graded SAND (SW), dense, fine to coarse grained with scattered cobbles (or pebbles), horizontal 4" thick layer of rust brown stain at 18'.
	-fine to medium grained, rust orange mottling
	-very dense
	-dense, fine to coarse grained, scattered pebbles
	-fine to medium grained
	SILTY SAND (SM), dark olive brown (5Y-3/2), very moist, loose, fine to medium grained sand with some silt, irregular rust orange mottling.
	SAND (SW), olive brown (5Y-4/3), saturated, loose, fine to coarse grained sand.
	CLAY (CH), black (5Y-2.5/1), moist, very stiff, slightly plastic, some scattered black carbon pieces.
	SANDY SILT (ML), very dark gray (5Y-3/1), slightly moist, loose, silt with very fine grained sand, scattered rootlets.

SAMPLING DATA

ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
LFSB3-5	0.4/26
	0.0/26
	NA/26
	0.2/37
	NA/56
	0.0/96
	NA/16
LFSB3-25	NA/45
LFSB3-30	0.8/21
	NA/20

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled
- Sample Retained

Well casing elevation:

Date well drilled: 04/01/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: def 4629

WELL CONSTRUCTION AND LITHOLOGY FOR NESTED VAPOR PROBE NVP3 AND SOIL BORING LFSB-3

Project No. 2455
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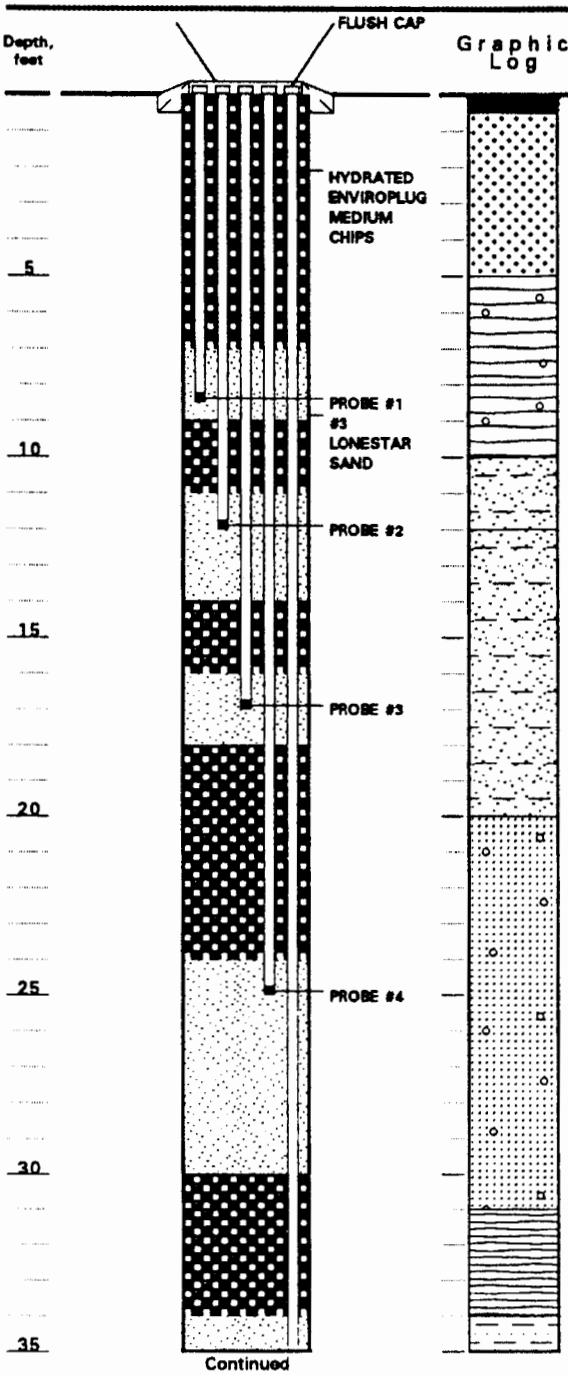
082793DSE/scj

WELL CONSTRUCTION	LITHOLOGY	SAMPLING DATA	
Depth, feet	Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
	CONCRETE		
5	SILTY CLAY (CL), dark grayish brown (2.5Y-4/2), moist, stiff, clay with some silt and trace very fine grained sand, irregular white mottling.		0.2/27
	CLAY (CL), black (5Y-2.52), moist, irregular white mottling, moderately plastic.		
10	SILTY SAND (SM), dark grayish brown (2.5Y-4/2), moist, moderately dense, fine to coarse grained sand with silt and trace clay.	LFSB4-10	0.6/33
	grades to SAND (SW), dense, fine to coarse grained.		
15	-olive brown (2.5Y-4/3), dense, fine to coarse grained, with scattered pebbles	LFSB4-15	0.2/66
	-rust-orange color		
	6" SILTY CLAY layer (CL), olive brown (2.5Y-4/3), MOIST.		
20	SAND (SW), dark yellowish brown (10YR-4/6), slightly moist, very dense, fine to coarse grained, some black staining.		0.5/33
	-light olive brown (2.5Y-5/4), dense, no staining		NA/56
			0.5/99
	-very dense, scattered pebbles		
25	-dense, no sample retained		NA/72
	-olive brown (2.5Y-4/3), saturated		0.7/72
			NA/24
	-moderately dense, fine to medium grained		NA/46
30		LFSB4-31	NA/21
	CLAY (CH), black (5Y-2.5/2), moist, very stiff, moderate plasticity.	LFSB4-31.5	NA/20
			NA/41
	-some scattered black carbon pieces		
35			



Continued

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Well casing elevation:

Date well drilled: 03/31/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: def 4629

WELL CONSTRUCTION AND LITHOLOGY FOR NESTED VAPOR PROBE NVP4 AND SOIL BORING LFSB-4

Project No. 2455
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WELL CONSTRUCTION		LITHOLOGY	SAMPLING DATA	
Depth, feet	Continued	Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
	PROBE #5	SANDY SILT (ML), black (5Y-2.5/1), very moist, dense silt with some very fine grained sand, scattered rootlets.	LFSB4-35	1.5/46 NA/26
		-very dark gray (5Y-3/1), very moist to moist, trace clay in 6" zone		
		SILTY CLAY (CL), very dark gray (5Y-3/1), moist, very stiff, clay and silt with very fine grained sand.		NA/23
40		SANDY SILT (ML), dark gray (5Y-4/1), moist, moderately dense, silt with very fine grained sand, trace clay.	40 LFSB4-40	0.2/23 NA/28
	PROBE #6			
		SAND (SW), gray (5Y-1), saturated, moderately dense, fine to coarse grained sand.		NA/40
		Bottom of boring at 43 feet.		
		NOTE: Nested vapor probes (NVP) constructed with 1/4" teflon tubing (TYP 6) and a stainless steel perforated tip.		NA = Not Analyzed ND = Not Detected

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Well casing elevation:

Date well drilled: 03/31/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: def 4629

WELL CONSTRUCTION AND LITHOLOGY FOR NESTED VAPOR PROBE NVP4 AND SOIL BORING LFSB-4 (CONTINUED)

Project No. 2455
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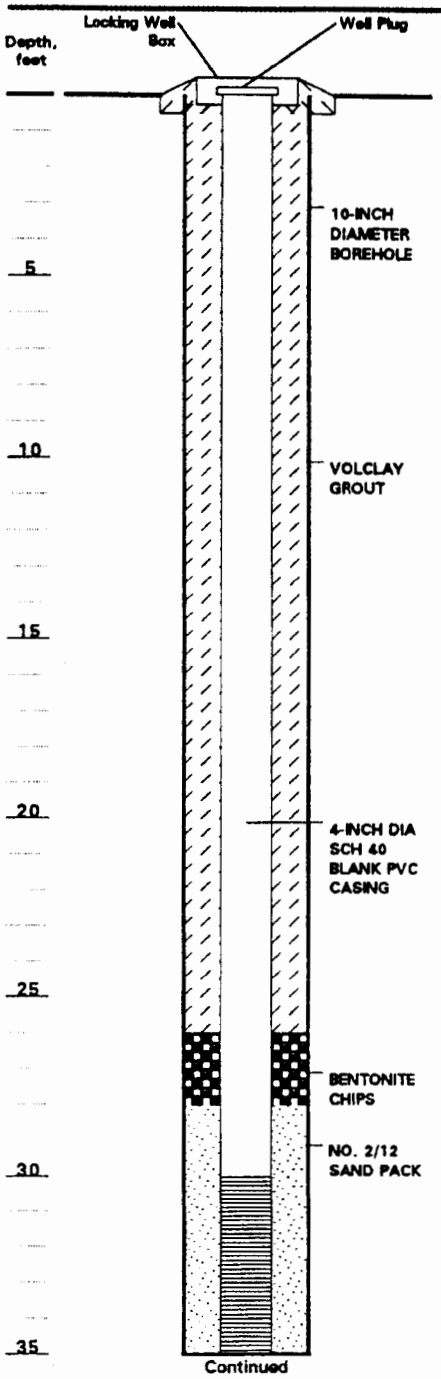
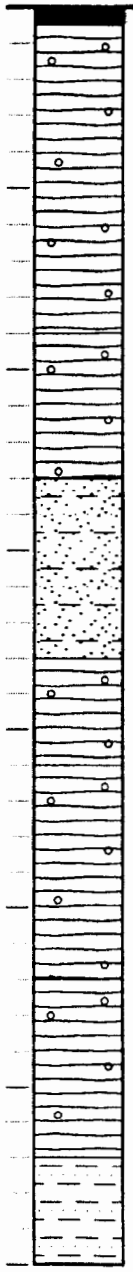
WELL CONSTRUCTION	LITHOLOGY	SAMPLING DATA





Visual Description

ASPHALT

SILTY CLAY (CL), very dark grayish brown (2.5Y-3/2), moist, stiff, slightly plastic, clay with some silt and trace very fine grained sand, some irregular white colored mottling.

SANDY CLAY (CL), dark grayish brown (2.5Y-4/2), moist, stiff, slightly plastic, clay with fine to medium grained sand, some rust-orange mottling.

SILTY SAND (SM), light olive brown (2.5Y-5/3), moist, loose, very fine grained sand with some silt, rust orange mottling.

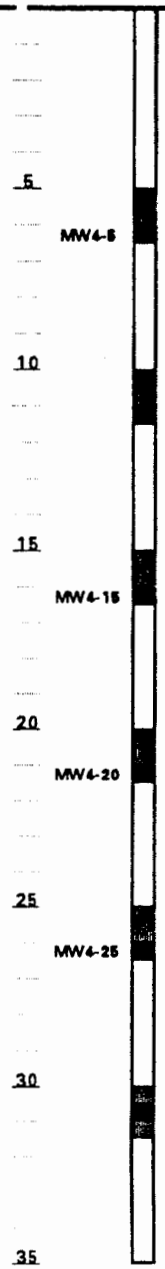
SILTY SAND (CL), olive brown (2.5Y-5/3), moist, stiff, moderately plastic, clay with silt, rust-orange mottling.

SAND (SW), olive brown (2.5Y-4/3), fine to coarse grained, rust orange mottling.

-grayish brown (2.5Y-5/2), very moist, moderately dense, several 2" thick zones with trace clay

CLAYEY SILT (ML), very dark gray (5Y-3/1), moist, stiff, moderately plastic, silt with clay.

SAND (SW), yellowish brown (10YR-5/4), moist, very dense, fine to coarse grained sand with scattered pebbles.



EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled
- Sample Retained

Well casing elevation: 304.78

Date well drilled: 04/02/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: def 4629

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-4

Project No. 2455
Calmar

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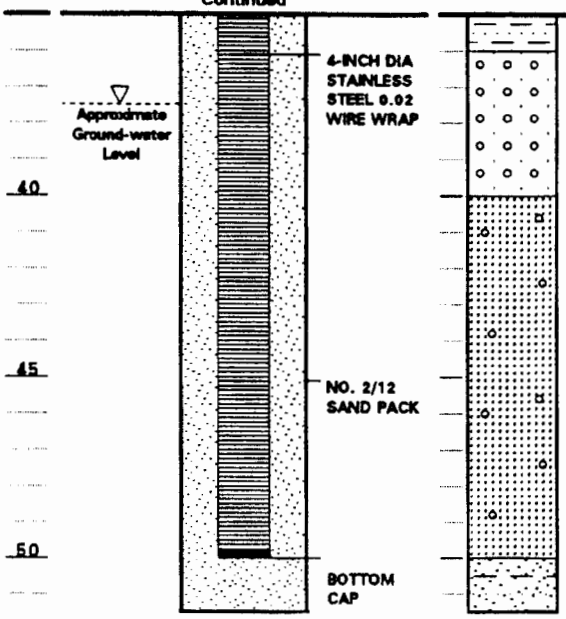
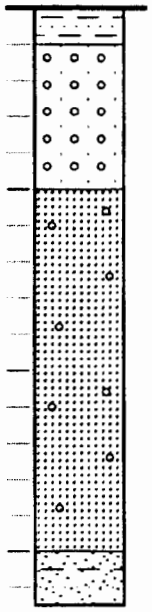
WELL CONSTRUCTION	LITHOLOGY	SAMPLING DATA





Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
GRAVEL (GW), dark yellowish brown (10YR-4/4), very moist, very dense, fine grained sand to cobbles.		0.1/108
SAND (SW), grayish brown (2.5Y-5/2), saturated, moderately dense, fine to coarse grained, some interbedded gravel indicated by driller.	40	NA/31
-dense	45	NA/45
SILTY SAND (SM), dark grayish brown (2.5Y-4/2), saturated, moderately dense, very fine to fine grained sand with some silt, micaceous.	50	NA/27
Bottom of boring at 51.5 feet.		

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled
- Sample Retained

Well casing elevation: 304.78

Date well drilled: 04/02/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: def 4629

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-4 (CONTINUED)

Project No. 2455
Calmar

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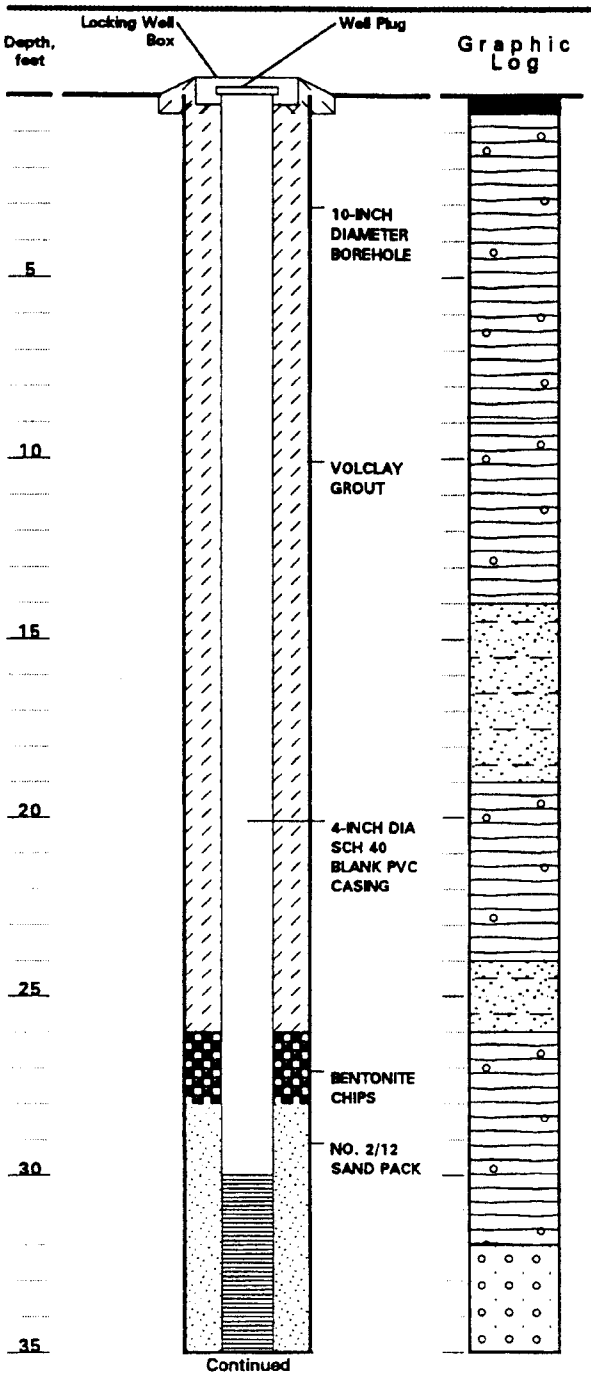
082793DSE/acj

WELL CONSTRUCTION		LITHOLOGY	SAMPLING DATA	
Depth, feet	Visual Description		ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
	ASPHALT			
	SILTY CLAY (CL), very dark gray (2.5Y-3/2), moist, very stiff, clay with some silt, trace fine grained sand, irregular white mottling.			
5			MW5-5	0.4/24
10	SANDY CLAY (CL), very dark gray (2.5Y-3/2), moist, very stiff, moderately plastic, clay with some fine grained sand.			0.4/20
15	SILTY SAND (SM), very dark gray (5Y-3/1), moist, moderately dense, very fine to fine grained sand with some silt.		MW5-15	0.4/22
20	SILTY CLAY (CL), dark olive gray (5Y-3/2), very moist, stiff, plastic, clay with some silt, trace fine grained sand, rust orange mottling.			0.2/18
25	SILTY SAND (SM), dark olive brown (5Y-3/2), very moist, moderately dense, fine to medium grained sand, some silt, rust orange mottling.		MW5-25	0.5/22
	SANDY CLAY (CL), dark olive brown (2.5Y-3/3), very moist, stiff, plastic, clay with some fine grained sand, rust orange mottling.			
30	Grades to SILTY CLAY (CL), very dark gray (5Y–3/1), moist, stiff, plastic, clay with some silt and trace fine grained sand.		MW5-30	0.4/15
	SANDY GRAVEL (GW), olive gray (5Y-4/7), saturated, dense, very fine grained sand to gravel, gravel with very fine to coarse grained sand.			
35				



EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled
- Sample Retained

Well casing elevation: 304.09

Date well drilled: 04/05/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: def 4629

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-5

Project No. 2455
Calmar

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082793DSE/ecj

WELL CONSTRUCTION		LITHOLOGY	SAMPLING DATA	
Depth, feet	Continued	Graphic Log / Visual Description	ID of Sample Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
	Approximate Ground-water Level			NA/75
40	4-INCH DIA STAINLESS STEEL 0.02 WIRE WRAP		40	NA/57
		SAND (SW), olive brown (2.5Y-4/3), saturated, dense, very fine to coarse grained sand.		
45	NO. 2/12 SAND PACK		45	NA/65
50	BOTTOM CAP	-fine to medium grained sand, trace coarse grained sand Bottom of boring at 51.5 feet.	50	NA/63

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled
- Sample Retained

Well casing elevation: 304.09

Date well drilled: 04/05/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: def 4629

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-5 (CONTINUED)

Project No. 2455
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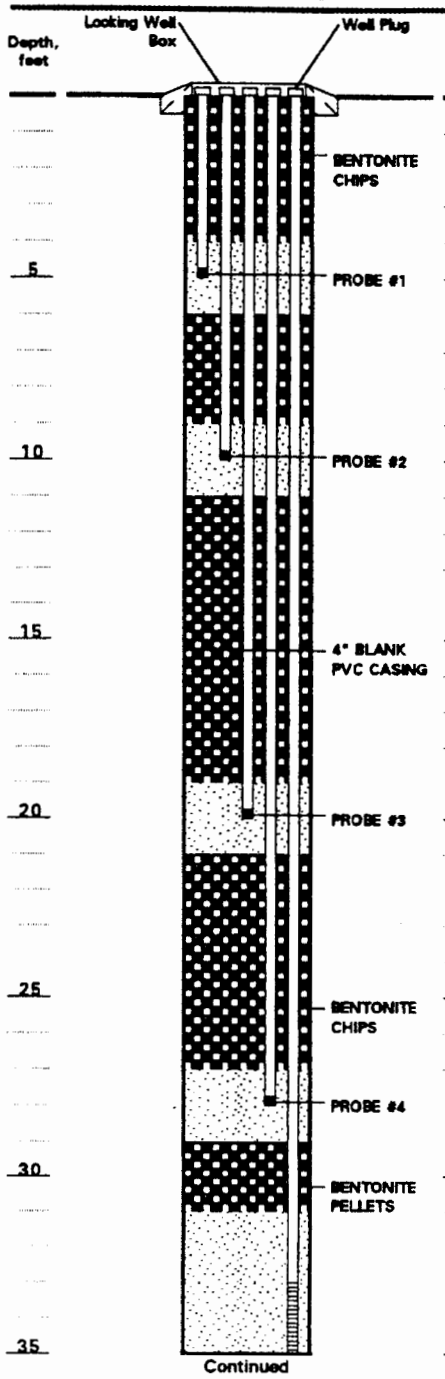
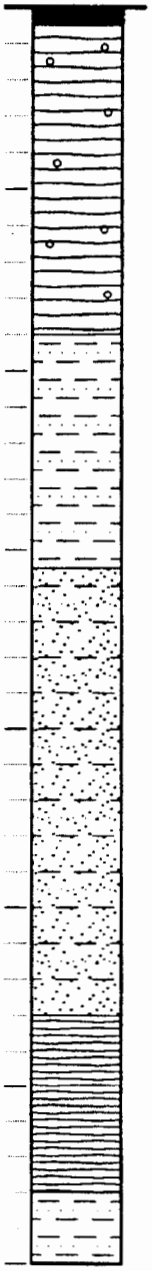
WELL CONSTRUCTION	LITHOLOGY	SAMPLING DATA





Visual Description

ASPHALT

SILTY CLAY (CL), very dark grayish brown (10YR-3/2), moist, stiff, clay with 30-40% silt, and trace fine sand, moderately plastic, irregular white colored mottling.

CLAYEY SILT (ML), dark grayish brown (2.5Y-4/2), moist, stiff, silt with 30-40% clay, trace fine sand, slightly plastic, irregular white mottling.

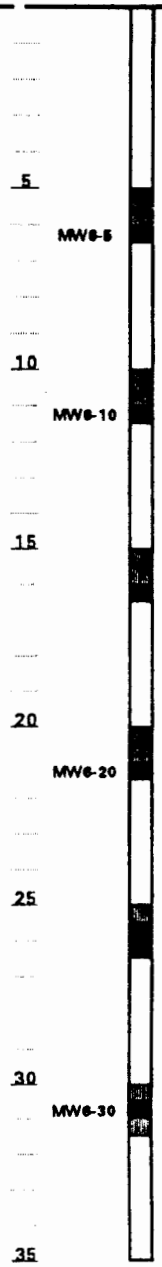
SILTY SAND (SM), olive brown (2.5Y-4/3), moist, moderately dense, fine sand with 20-30% silt, some rust-orange mottling.

-30-40% silt

-dark grayish brown (2.5Y-4/2), very moist, trace clay

CLAY (CH), black (7.5YR-N2), moist, stiff, clay, high plasticity.

SANDY SILT (ML), very dark grayish brown (5Y-3/1), moist, silt with 30-40% very fine grained sand, micaceous, rootlets.



EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled
- Sample Retained

Well casing elevation: 303.50

Date well drilled: 07/19/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: dcf 4629

WELL CONSTRUCTION AND LITHOLOGY FOR MW-6 AND NVP5

Project No. 2455
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WELL CONSTRUCTION		LITHOLOGY	SAMPLING DATA	
Depth, feet	Continued	Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
	Approximate Ground-water Level	SANDY SILT (ML), very dark grayish brown (5Y-3/1), moist, silt with 30-40% very fine grained sand, micaceous, rootlets.	MW6-35	0.8/14
40	2/12 SAND	-wet, 40-50% fine grained sand	40	NA/14
45	4" STAINLESS STEEL WIRE WRAP (0.02") SLOT	SAND (SW), olive brown (2.5Y-4/3), saturated, well graded, fine to very coarse grained sand with scattered pebbles.	45	
50	BOTTOM CAP	-6" thick layer of SANDY SILT (ML), dark grayish brown (2.5Y-4/2)	50	NA = Not Analyzed

Bottom of boring at 51 feet.
NOTE:
Nested vapor probes (NVP) constructed with 1/4" teflon tubing (TYP 4) and a stainless steel perforated tip.

EXPLANATION

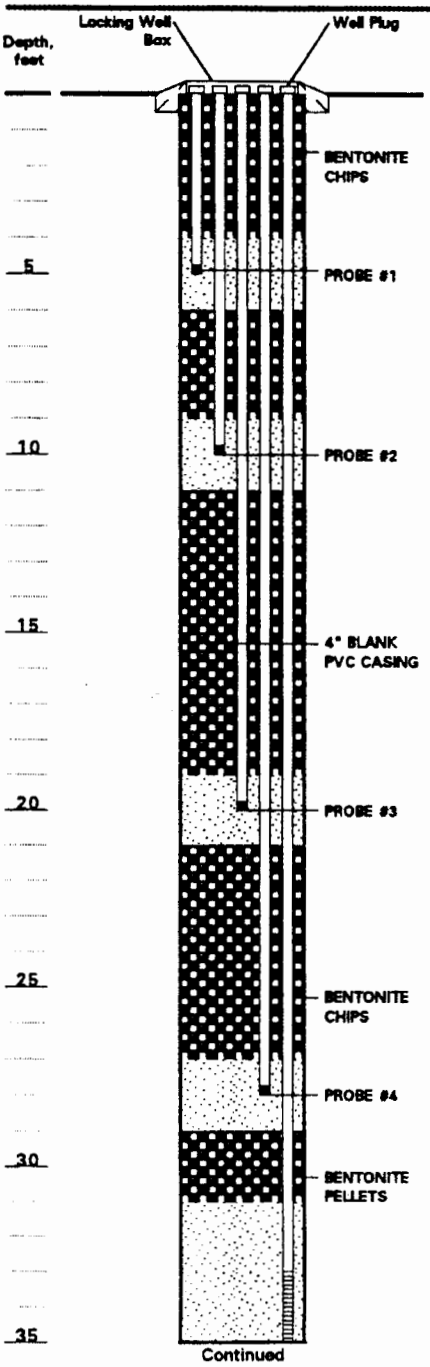
Clay
Silt
Sand
Gravel

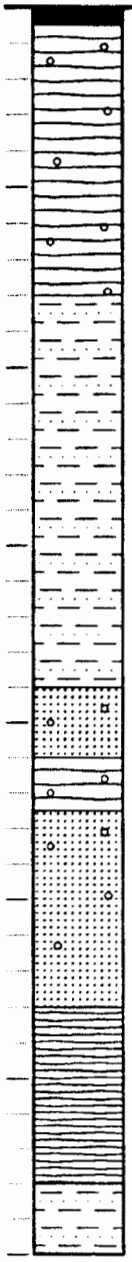
Interval Sampled
Sample Retained

Well casing elevation: 303.50
Date well drilled: 07/19/93 -
L• F Geologist/Engineer: D.S. Eley
Approved by: deff 4629

WELL CONSTRUCTION AND LITHOLOGY FOR MW-6 AND NVP5 (CONTINUED)

WELL CONSTRUCTION / LITHOLOGY / SAMPLING DATA





Visual Description

ASPHALT

SANDY SILTY CLAY (CL), dark grayish brown (2.5Y-4/2), slightly moist, stiff, clay with 30-40% silt and 5-10% fine sand, irregular white mottling, slight plasticity.

CLAYEY SILT (ML), light olive brown (2.5Y-5/3), moist, stiff, silt with 10-30% clay, several interbeds with up to 50% clay, slight plasticity.

SANDY SILT (ML), olive brown (2.5Y-4/3), very moist, moderately dense, silt with 25-35% fine grained sand, some rust-orange mottling.

SAND (SW), brown (10YR-4/3), wet, moderately dense, fine to coarse grained sand.

SILTY CLAY (CL), dark grayish brown (2.5Y-4/2), moist, moderately dense, stiff, plastic, clay with 20-30% silt.

SAND (SW), dark grayish brown (10YR-4/2), moist, dense, fine to coarse grained sand, interbeds with 5-20% silt, scattered pebbles.

CLAY (CH), black (7.5YR-N21), moist, very stiff, plastic, clay with trace silt, rootlets.

SANDY SILT (ML), very dark gray (5Y-3/1), moist, stiff, silt with 10-20% very fine grained sand and trace clay, micaceous, rootlets.

SAMPLING DATA

ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
MW7-5	0.2/26
MW7-10	0.2/20
	0.2/19
MW7-20	0.5/21
MW7-25	0.8/33
MW7-30	0.5/17

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Well casing elevation: 303.04

Date well drilled: 07/20/93 -

L• F Geologist/Engineer: D.S. Eley

Approved by: dgf 4629

WELL CONSTRUCTION AND LITHOLOGY FOR MW-7 AND NVP6

Project No. 2455
Calmar

LEVINE • FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

082793DSE/scj

WELL CONSTRUCTION		LITHOLOGY	SAMPLING DATA	
Depth, feet	Continued	Graphic Log / Visual Description	ID of Samples Analyzed	O V A (ppm)/ Penetration Rate (blows/ft.)
			MW7-35	0.3/17
40	Approximate Ground-water Level; 2/12 SAND	-very moist, 10-20% clay, rootlets	40	
		SAND (SW), dark gray (10YR-4/1), saturated, fine to coarse grained sand, scattered pebbles.		0.2/22
45	4" STAINLESS STEEL WIRE WRAP (0.02") SLOT		45	0.2/NA
50		-scattered rock up to 5cm maximum diameter	50	0.2/NA
	BOTTOM CAP			

Bottom of boring at 54 feet.
NOTE:
Heaving sands, difficulty in setting well.
Nested vapor probes (NVP) constructed with 1/4" teflon tubing (TYP 4) and a stainless steel perforated tip.

NA = Not Analyzed

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Well casing elevation: 303.04
Date well drilled: 07/20/93 -
L• F Geologist/Engineer: D.S. Eley
Approved by: def 4629

WELL CONSTRUCTION AND LITHOLOGY FOR MW-7 AND NVP6 (CONTINUED)

Project No. 2455
Calmar

LEVINE • FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

APPENDIX B

Description of Field Procedures

APPENDIX B

FIELD PROCEDURES

Drilling

A limited magnetic survey was conducted prior to commencing work in an attempt to identify underground utilities in the vicinity of the proposed drilling locations. Necessary permits were also acquired prior to drilling activities.

Borings were advanced using the hollow-stem auger drilling method. Eight-inch and ten-inch-diameter augers were used for soil borings and ground-water monitoring wells, respectively. To reduce the potential for cross contamination between borings, auger flights and all downhole drilling and sampling equipment were steam cleaned prior to use at each drilling location.

Soils generated during drilling activities were placed in Department of Transportation (DOT)-approved roll-off bins and stored on site pending evaluation of disposal options. The soils were covered with plastic sheeting while stored. The soil receptacles were labeled to identify those drilling location(s) from which the soils were generated.

Soil Sampling

The soil samples were collected using a split-spoon sampler lined with clean brass or stainless steel tubes. Soil sampling equipment was scrubbed with a laboratory-grade detergent and double-rinsed with distilled water between sampling intervals.

Soils were sampled at 5-foot intervals, or at other selected intervals specified by the site work plan, or at the discretion of the on-site Levine·Fricke geologist or engineer. Soil samples were lithologically described and classified using the Unified Soil Classification System. A lithologic log was prepared for each boring. Drilling and logging were performed under the direction of a Levine·Fricke California Registered Geologist (RG).

Soil samples were screened in the field for volatile organic compound (VOC) emissions using a flame ionization detector (FID) or a photoionization detector (PID). The FID or PID were calibrated prior to use. One soil sample from each sampling interval was placed in a plastic bag, broken apart, and allowed to stand for a minimum of 5 minutes prior to screening. The concentration of the VOCs in the resultant "head space" gas was then measured with the FID or PID and recorded.

In each boring, one brass or stainless steel tube from each sampling interval was retained for possible chemical analysis. The retained tubes were covered on both ends with Teflon sheeting and sealed using plastic caps. The samples were then labeled and stored in a chilled cooler pending delivery to the analytical laboratory. Strict chain-of-custody protocol was followed throughout all phases of the sample handling process.

The selection of soil samples submitted for chemical analysis was based on field observations such as VOC emission measurements using the FID or PID and soil staining.

The soil sampling boreholes were backfilled to grade with a bentonite grout slurry and capped with a minimum of 6 inches of concrete after soil sampling was completed.

Monitoring Well Construction

Ground-water monitoring wells were constructed of 4-inch inside diameter Schedule 40 PVC flush-threaded well casing. Screened intervals were completed with 0.02-inch slotted casing. After installing the well casing in each well boring, the well annulus opposite and extending 2 feet above the perforated casing were backfilled with sand. The sand pack was sealed by the installation of a 2-foot-thick layer of bentonite. A bentonite well grout was pumped from the top of the bentonite seal to ground surface using a tremie pipe for effective placement of the grout. The top of each well was secured using an appropriate utility box and locking well cap.

Ground-Water Monitoring Well Development and Sampling

All equipment used to develop or sample the wells was washed in a laboratory-grade detergent and/or steam cleaned prior to use in each monitoring well.

Development of ground-water monitoring wells prior to sampling was conducted to remove sediments from the well boring and enhance communication with the surrounding formation. Development was conducted using one or a combination of the following techniques: overpumping, surging, swabbing, and bailing. The ground-water temperature, specific conductivity, turbidity, and pH were monitored during the development process.

Prior to ground-water sampling, approximately 4 to 10 casing volumes were purged from each well. Purging was conducted using an electric submersible pump. The ground-water temperature, specific conductance, turbidity, and pH were measured throughout the purging process. These ground-water parameters were allowed to reach

relative stabilization before ground-water samples were collected for the purpose of collecting a representative ground-water sample.

Purged ground water was collected in DOT-approved drums for storage on site, or stored in an on-site PolyTank.

Ground-water samples were collected from all wells using a Teflon disposable bailer suspended by a clean (new) length of rope. Ground-water samples were decanted from the bailer into appropriate laboratory-supplied 40-milliliter vials using a bottom decanting pep-cock device. The containers were sealed, labeled, and placed in a chilled cooler for delivery to the analytical laboratory. Strict chain-of-custody protocol was followed throughout the sample handling process.

Measurement of Ground-Water Elevation

After the ground-water monitoring wells have been installed, the top of each well casing was surveyed for vertical and horizontal control by a licensed surveyor. Elevation was surveyed to the nearest 0.01 foot mean sea level. Horizontal control was tied to a United States Geological Survey or Los Angeles County bench mark.

An electronic water-level meter was used to measure the depth to ground water to the nearest 0.01 foot in each well. Ground-water elevations were calculated and used to construct ground-water elevation contour maps from which the direction of ground-water flow and gradient may be evaluated.

Soil-Vapor Testing

See the Terra Tech Labs reports in Appendix C for a detailed discussion of soil-vapor testing procedures and protocols.

APPENDIX C

Laboratory Data Sheets and Chain-of-Custody Documentation

Ground Water

TERRA TECH LABS

1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274

LABORATORY REPORT

Client:	Levine Fricke	Report Date:	4/21/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4685
		Client P.N.:	2455.09
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	4/15/93
Project Address:	333 Turnbull Canyon Road	Date Received:	4/15/93
		Date Analyzed:	4/16/93-4/20/93
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	101	101	65-120	0	0-20
Toluene (EPA 8020)	M	104	104	60-122	1	0-22
Ethylbenzene (EPA 8020)	M	105	104	46-130	0	0-20
Xylenes, Total (EPA 8020)	M	104	103	45-135	0	0-19
1,1-Dichloroethane (EPA 8010)	M	102	106	76-128	4	0-17
1,1,1-Trichloroethane (EPA 8010)	M	35*	33*	72-119	6	0-22
Cis-1,3-Dichloropropene (EPA 8010)	M	110	101	65-126	9	0-16
Chlorobenzene (EPA 8010)	M	115	109	36-138	5	0-25

*Outside of QC criteria due to elevated levels of 1,1,1-Trichloroethane in sample used for spiking.

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs, inc. is not an indicaton of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/21/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4685
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	4/15/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/16/93-4/17/93
		Physical State:	Liquid

Aromatic Volatile Organics, EPA 8020

Sample ID	Benzene EPA 8020 µg/l	Toluene EPA 8020 µg/l	Ethylbenzene EPA 8020 µg/l	Xylenes, Total EPA 8020 µg/l
MW-2	ND	ND	ND	ND
MW-3	ND	ND	ND	ND
P-2	ND	1.2	ND	ND
P-3	ND	ND	ND	ND
P-30	ND	ND	ND	ND
LFEB-1	1.0	1.2	ND	ND
Quantitation Limits µg/l	1.0	1.0	1.0	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/21/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4685
		Client P.N.:	2455.09

Project Name:	Calmar	Date Sampled:	4/15/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/16/93-4/20/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-2	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	96	10
Methylene chloride	ND	5.0
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	20	1.0
cis-1,2-Dichloroethene	3.9	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	98	10
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	250	10
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	8.2	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/21/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4685
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	4/15/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/16/93-4/20/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-3	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	71	10
Methylene chloride	ND	5.0
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	7.5	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	4.2	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	24	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	170	10
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/21/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4685
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	4/15/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/16/93-4/20/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	P-2	P-3	P-30	LFEB-1	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	58	ND	ND	ND	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	8.4	ND	ND	ND	1.0
cis-1,2-Dichloroethene	12	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	1.1	2.1	2.2	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	140	4.3	4.5	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	18	6.5	6.7	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

4685

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2455.09

Field Logbook No.:

Date: 4/15/93

Serial No.: № N- 2749

Project Name: CALMAR

Project Location: City of Industry

Sampler (Signature): [signature]

Samplers: T-T / JAF

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010/8020				HOLD	RUSH	REMARKS
MW-2	4/15	2:30	1C21041	4	H_2O			X						Results to Don Eley
MW 3		2:00	1C21042					X						
P-2		2:48	1C21043					X						
P-3		3:35	1C21044					X						
P-30			1C21045					X						
LFEB-1		10:15	1C21046	2				X						

RELINQUISHED BY: (Signature) [signature]	DATE 4/15/93	TIME 4:51	RECEIVED BY: (Signature) [signature]	DATE 4/15/93	TIME 1651
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
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:

Terra Tech Labs

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

FORM NO. 86/COC/ARF

TERRA TECH LABS

1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274

LABORATORY REPORT

Client:	Levine Fricke	Report Date:	4/23/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4693
		Client P.N.:	2455.09
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	4/16/93
Project Address:	City of Industry, CA	Date Received:	4/16/93
		Date Analyzed:	4/16/93-4/20/93
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 602*)	M	93	95	66-118	3	0-23
Toluene (EPA 602*)	M	92	95	67-118	3	0-18
Ethylbenzene (EPA 602*)	M	94	97	64-114	3	0-19
Xylenes, Total (EPA 602*)	M	93	96	70-115	3	0-17
1,1-Dichloroethane (EPA 601*)	M	88	89	57-152	2	0-37
1,1,1-Trichloroethane (EPA 601*)	M	85	87	42-152	2	0-24
cis-1,3-Dichloropropene (EPA 601*)	M	93	95	73-136	2	0-22
Chlorobenzene (EPA 601*)	M	90	92	63-144	2	0-24

*EPA Method 601 was adapted to include wide-bore capillary analysis; EPA Method 602 was adapted to include wide-bore capillary analysis and to add xylenes.

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs, Inc. is not an indication of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

RECEIVED
6
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/23/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4693
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	4/16/93
Project Address:	City of Industry, CA	Date Analyzed:	4/20/93
		Physical State:	Liquid

Aromatic Volatile Organics, EPA 602

Sample ID	Benzene EPA 602 µg/l	Toluene EPA 602 µg/l	Ethylbenzene EPA 602 µg/l	Xylenes, Total EPA 602 µg/l
MW-1	ND	1.7	ND	ND
MW-4	ND	ND	ND	ND
MW-5	ND	ND	ND	ND
P-1	ND	ND	ND	ND
P-10	ND	ND	ND	ND
LFEB-2	ND	ND	ND	ND
Quantitation Limits µg/l	1.0	1.0	1.0	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/23/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4693
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	4/16/93
Project Address:	City of Industry, CA	Date Analyzed:	4/20/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 601

Sample ID	MW-1	MW-4	MW-5	LFEB-2	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	11	5.4	2.4	ND	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	2.0	2.4	1.8	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	15	4.5	2.8	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	18	12	5.0	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/23/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4693
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	4/16/93
Project Address:	City of Industry, CA	Date Analyzed:	4/20/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 601

Sample ID	P-1	P-10	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	1.0
Vinyl chloride	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
1,1-Dichloroethene	55	57	2.0
Methylene chloride	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane	2.4	2.1	1.0
Carbon tetrachloride	ND	ND	1.0
1,2-Dichloroethane	ND	ND	1.0
Trichloroethene	6.0	5.7	1.0
1,2-Dichloropropane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene	18	16	1.0
Dibromochloromethane	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
Bromoform	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/23/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4693
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	4/16/93
Project Address:	City of Industry, CA	Date Analyzed:	4/16/93
		Physical State:	Liquid

Sample ID	Turbidity EPA 180.1 NTU
MW-5	17.8
Quantitation Limits NTU	0.10

NTU = Nepheiometric Turbidity Units

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

4693

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2455.09

Field Logbook No.:

Date: 4/16/93

Serial No.: № N- 2750

Project Name: CALMAR

Project Location: City of Industry

Sampler (Signature): [signature]

Samplers: TLT / SAF

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010/8020	Turbidity		Hold Turbidity	HOLD	RUSH	REMARKS
MW-1	4/16	11:35	IC21068	5	H_2O			X			X			results to Don Eley
MW-4		2:15	IC21069	4				X						
MW-5		2:40	IC21070	5				X	X					
P-1		9:31	IC21071	4				X						
P-10			IC21072	4				X						
LFEB-2		9:00	IC21073	2				X						

RELINQUISHED BY: (Signature) [signature]	DATE 4/16/93	TIME 3:45	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME

TERRA TECH LABS

1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	4/28/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4719
		Client P.N.:	2455.09
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	4/23/93
Project Address:	City of Industry	Date Received:	4/23/93
		Date Analyzed:	4/23/93
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1,1-Dichloroethane (EPA 601*)	M	88	89	57-152	2	0-37
1,1,1-Trichloroethane (EPA 601*)	M	85	87	42-152	2	0-24
cis-1,3-Dichloropropene (EPA 601*)	M	93	95	73-136	2	0-22
Chlorobenzene (EPA 601*)	M	90	92	63-144	2	0-24
Benzene (EPA 602*)	M	93	95	66-118	3	0-23
Toluene (EPA 602*)	M	92	95	67-118	3	0-18
Ethylbenzene (EPA 602*)	M	94	97	64-114	3	0-19
Xylenes, Total (EPA 602*)	M	93	96	70-115	3	0-17

*EPA Method 601 was adapted to include wide-bore capillary analysis; EPA Method 602 was adapted to include wide-bore capillary analysis and to add xylenes.

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs, Inc. is not an indication of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

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5
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/28/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4719
		Client P.N.:	2455.09

Project Name:	Calmar	Date Sampled:	4/23/93
Project Address:	City of Industry	Date Analyzed:	4/23/93
		Physical State:	Liquid

Aromatic Volatile Organics, EPA 602

Sample ID	Benzene EPA 602 µg/l	Toluene EPA 602 µg/l	Ethylbenzene EPA 602 µg/l	Xylenes, Total EPA 602 µg/l
MW-4	ND	ND	ND	ND
MW-5	ND	1.6	ND	ND
EB-3	ND	ND	ND	ND
Quantitation Limits µg/l	1.0	1.0	1.0	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/28/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4719
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	4/23/93
Project Address:	City of Industry	Date Analyzed:	4/23/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 601

Sample ID	MW-4	MW-5	EB-3	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	1.0
1,1-Dichloroethene	6.3	1.0	ND	1.0
Methylene chloride	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	1.0
Chloroform	ND	ND	ND	1.0
1,1,1-Trichloroethane	2.4	1.7	ND	1.0
Carbon tetrachloride	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	1.0
Trichloroethene	4.9	2.2	ND	1.0
1,2-Dichloropropane	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	1.0
Tetrachloroethene	12	5.9	ND	1.0
Dibromochloromethane	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	1.0
Bromoform	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

4719

Project No.: 2455.09	Field Logbook No.:	Date: 4/23/93	Serial No.: Nº N- 3205
Project Name: CALMAR	Project Location: City of Industry		
Sampler (Signature): [signature]			Samplers: [illegible]

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010/8020	Turbidity			HOLD	RUSH	REMARKS
MW-4	4/23	1:30	1C21257	~~3~~ 4	H_2O			X	X					Results to Don Eley
MW-5	↓	1:55	1C21258	~~4~~ 3				X	~~X~~					
MW-50	↓	2:00	1C21259	3								X		
EB-3	↓	9:15	1C21260	2				X						

RELINQUISHED BY: (Signature) [signature]	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) K. Spalding	DATE 4/23/93	TIME 1300
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:

LEVINE-FRICKE
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:

Terra Tech

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

FORM NO. 86/COC/ARF

Corporate Office
1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274
Arizona Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602.437.9367 ▲ Fax 602.437.9362

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	8/2/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5329
		Client P.N.:	2455-08
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	8/2/93
Project Address:	City of Industry, CA	Date Received:	8/4/93
		Date Analyzed:	8/5/93-8/11/93
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	82	86	66-118	5	0-23
Toluene (EPA 8020)	M	84	86	67-118	3	0-18
Ethylbenzene (EPA 8020)	M	90	90	64-114	0	0-19
Xylenes, Total (EPA 8020)	M	77	70	70-115	10	0-17
1,1-Dichloroethane (EPA 8010)	M	87	95	57-152	9	0-37
1,1,1-Trichloroethane (EPA 8010)	M	94	91	42-152	3	0-24
cis-1,3-Dichloropropene (EPA 8010)	M	81	82	73-136	1	0-22
Chlorobenzene (EPA 8010)	M	84	99	63-144	17	0-24

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

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The Laboratory Results are only a portion of the Laboratory Report.

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3
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/2/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5329
		Client P.N.:	2455-08
Project Name:	Calmar	Date Sampled:	8/2/93
Project Address:	City of Industry, CA	Date Analyzed:	8/5/93
		Physical State:	Liquid

Sample ID	Turbidity EPA 180.1 NTU
93GWP032	14
Quantitation Limits NTU	0.10

NTU = Nephelometric Turbidity Units

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/2/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5329
		Client P.N.:	2455-08
Project Name:	Calmar	Date Sampled:	8/2/93
Project Address:	City of Industry, CA	Date Analyzed:	8/8/93-8/11/93
		Physical State:	Liquid

Sample ID	Benzene EPA 8020 µg/l	Toluene EPA 8020 µg/l	Ethylbenzene EPA 8020 µg/l	Xylenes, Total EPA 8020 µg/l
93GWMW132	ND	ND	ND	ND
93GWMW022	ND	ND	ND	ND
93GWEQ012	ND	ND	ND	ND
93GWP032	ND	ND	ND	ND
93GWP012	ND	ND	ND	ND
Quantitation Limits µg/l	1.0	1.0	1.0	1.0

ND; Not Detectable
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LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/2/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5329
		Client P.N.:	2455-08

Project Name:	Calmar	Date Sampled:	8/2/93
Project Address:	City of Industry, CA	Date Analyzed:	8/11/93
		Physical State:	Liquid

Sample ID	Benzene EPA 8020 µg/l	Toluene EPA 8020 µg/l	Ethylbenzene EPA 8020 µg/l	Xylenes, Total EPA 8020 µg/l
93GWMW032	ND	ND	ND	ND
Quantitation Limits µg/l	5.0	5.0	5.0	5.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/2/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5329
		Client P.N.:	2455-08
Project Name:	Calmar	Date Sampled:	8/2/93
Project Address:	City of Industry, CA	Date Analyzed:	8/10/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	93GWMW132	93GWMW032	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	8.4	ND	1.0
Vinyl chloride	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
1,1-Dichloroethene	56	47	1.0
Methylene chloride	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	7.9	9.6	1.0
cis-1,2-Dichloroethene	ND	ND	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane	3.4	2.3	1.0
Carbon tetrachloride	ND	ND	1.0
1,2-Dichloroethane	ND	ND	1.0
Trichloroethene	26	23	1.0
1,2-Dichloropropane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene	110	160	5.0
Dibromochloromethane	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
Bromoform	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/2/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5329
		Client P.N.:	2455-08
Project Name:	Calmar	Date Sampled:	8/2/93
Project Address:	City of Industry, CA	Date Analyzed:	8/10/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	93GWMW022	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	9.6	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	49	1.0
Methylene chloride	ND	10
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	9.2	1.0
cis-1,2-Dichloroethene	1.6	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	34	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	110	1.0
1,2-Dichloropropane	200	5.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	4.7	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client: Levine-Fricke
Client Address: 1920 Main Street, Suite750
Irvine, CA 92714

Report Date: 8/2/93
Lab P.N.: 5329
Client P.N.: 2455-08

Project Name: Calmar
Project Address: City of Industry, CA

Date Sampled 8/2/93
Date Analyzed 8/8/93-8/11/93
Physical State: Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	93GWEQ012	93GWP032	93GWP012	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	15	ND	1.0
Vinyl chloride	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	1.0
1,1-Dichloroethene	ND	ND	49	1.0
Methylene chloride	ND	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	1.6	1.0
cis-1,2-Dichloroethene	ND	ND	ND	1.0
Chloroform	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	3.2	1.0
Carbon tetrachloride	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	1.0
Trichloroethene	ND	3.2	7.8	1.0
1,2-Dichloropropane	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	1.0
Tetrachloroethene	ND	4.0	14	1.0
Dibromochloromethane	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	1.0
Bromoform	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

5329

Project No.: 2455-08	Field Logbook No.:	Date: 8-2-93	Serial No.: № N- 3052
Project Name: Calmar	Project Location: City of Industry		
Sampler (Signature):			Samplers: SAF

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010/8020	Turbidity			HOLD	RUSH	REMARKS
936WMW032	8-2	6:45	IC31886	[redacted]	H2O			X				X		* WIP Program in process - All questions & results to Don Eley
936WMW022	8-2	4:30	IC31887	[redacted]	"			X				X		
936WEQ012	8-2	2:40	IC31888	3	"			X				X		
936WP032	8-2	1:40	IC31889	5	"			X	X					
936WMW032	8-2	6:40	IC31890	4	"			X						
936WP012	8-2	6:20	IC31891	4	"			X						

RELINQUISHED BY: (Signature)	DATE 8-4-93	TIME 7:10	RECEIVED BY: (Signature)	DATE 8/4/93	TIME 710
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
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:

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

FORM NO. 86/COC/ARF

Corporate Office
1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274
Arizona Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602.437.9367 ▲ Fax 602.437.9362

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	8/13/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5330
		Client P.N.:	2455-08
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	8/3/93
Project Address:	City of Industry, CA	Date Received:	8/4/93
		Date Analyzed:	8/11/93
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	83	88	66-118	6	0-23
Toluene (EPA 8020)	M	84	86	67-118	2	0-18
Ethylbenzene (EPA 8020)	M	92	91	64-114	1	0-19
Xylenes, Total (EPA 8020)	M	78	71	70-115	9	0-17
1,1-Dichloroethane (EPA 8010)	M	102	118	57-152	14	0-37
1,1,1-Trichloroethane (EPA 8010)	M	99	107	42-152	7	0-24
cis-1,3-Dichloropropene (EPA 8010)	M	91	100	73-136	9	0-22
Chlorobenzene (EPA 8010)	M	102	116	63-144	13	0-24

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs, Inc. is not an indication of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

RECEIVED
3
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/13/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5330
		Client P.N.:	2455-08

Project Name:	Calmar	Date Sampled:	8/3/93
Project Address:	City of Industry, CA	Date Analyzed:	8/11/93
		Physical State:	Liquid

Sample ID	Benzene EPA 8020 µg/l	Toluene EPA 8020 µg/l	Ethylbenzene EPA 8020 µg/l	Xylenes, Total EPA 8020 µg/l
93GWMW012	ND	ND	ND	ND
93GWP022	ND	ND	ND	ND
93GWMW042	ND	ND	ND	ND
93GWEQ022	ND	ND	ND	ND
93GWMW072	ND	ND	ND	ND
93GWMW062	ND	ND	ND	ND
93GWMW162	ND	ND	ND	ND
93GWMW052	ND	ND	ND	ND
Quantitation Limits µg/l	1.0	1.0	1.0	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/13/93
Client Address:	1920 Main Street, Suite750	Lab P.N.:	5330
	Irvine, CA 92714	Client P.N.:	2455-08
Project Name:	Calmar	Date Sampled:	8/3/93
Project Address:	City of Industry, CA	Date Analyzed:	8/11/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	93GWMW012	93GWP022	93GWMW042	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	18	4.1	10	1.0
Vinyl chloride	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	1.0
1,1-Dichloroethene	7.0	ND	1.9	1.0
Methylene chloride	ND	ND	ND	6.0
trans-1,2-Dichloroethene	ND	ND	ND	1.0
1,1-Dichloroethane	ND	8.3	ND	1.0
cis-1,2-Dichloroethene	ND	9.4	ND	1.0
Chloroform	ND	ND	ND	1.0
1,1,1-Trichloroethane	1.4	1.1	1.2	1.0
Carbon tetrachloride	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	1.0
Trichloroethene	ND	93	3.6	1.0
1,2-Dichloropropane	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	1.0
Tetrachloroethene	13	12	8.9	1.0
Dibromochloromethane	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	1.0
Bromoform	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/13/93
Client Address:	1920 Main Street, Suite750	Lab P.N.:	5330
	Irvine, CA 92714	Client P.N.:	2455-08
Project Name:	Calmar	Date Sampled:	8/3/93
Project Address:	City of Industry, CA	Date Analyzed:	8/11/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	93GWEQ022	93GWMW072	93GWMW062	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	14	14	1.0
Vinyl chloride	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	1.0
1,1-Dichloroethene	ND	12	2.6	1.0
Methylene chloride	ND	ND	ND	6.0
trans-1,2-Dichloroethene	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	1.0
Chloroform	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	3.4	2.6	1.0
Carbon tetrachloride	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	1.0
Trichloroethene	ND	16	12	1.0
1,2-Dichloropropane	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	1.0
Tetrachloroethene	ND	3.7	4.8	1.0
Dibromochloromethane	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	1.0
Bromoform	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/13/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5330
		Client P.N.:	2455-08
Project Name:	Calmar	Date Sampled:	8/3/93
Project Address:	City of Industry, CA	Date Analyzed:	8/11/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	93GWMW162	93GWMW052	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	12	38	1.0
Vinyl chloride	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
1,1-Dichloroethene	ND	ND	1.0
Methylene chloride	ND	ND	6.0
trans-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane	ND	2.4	1.0
Carbon tetrachloride	ND	ND	1.0
1,2-Dichloroethane	ND	ND	1.0
Trichloroethene	14	1.7	1.0
1,2-Dichloropropane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene	5.2	3.3	1.0
Dibromochloromethane	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
Bromoform	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

5330

Project No.: 2455	Field Logbook No.:	Date: 8-3-93	Serial No.: Nº N- 3056
Project Name: Calmar	Project Location: City of Industry		
Sampler (Signature): [signature]			Samplers: SAF

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010/8020				HOLD	RUSH	REMARKS
936WMW012	8-3	12:50	IC31898	4	H_2O			X						*WIP Program in Process - All Questions & results to Don Eley
936WP022	8-3	1:00	IC31893	4	"			X						
936WMW046	8-3	3:25	IC31894	4	"			X						
936WEQ022	8-3	5:35	IC31895	4	"			X						
936WMW072	8-3	6:30	IC31896	4	"			X						
936WMW062	8-3	8:00	IC31897	4	"			X						
936WMW162	8-3	8:10	IC31898	4	"			X						
936WMW052	8-3	8:25	IC31899	4	"			X						

RELINQUISHED BY: (Signature) [signature]	DATE 8-4-93	TIME 7:10	RECEIVED BY: (Signature) [signature]	DATE 8-4-93	TIME 710
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
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:

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

FORM NO. 86/COC/ARF

Corporate Office
1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274
Arizona Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602.437.9367 ▲ Fax 602.437.9362

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	8/18/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	5369
		Client P.N.:	2455
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	8/10/93
Project Address:	City of Industry, CA	Date Received:	8/10/93
		Date Analyzed:	8/13/93
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	96	92	71-119	4	0-17
Toluene (EPA 8020)	M	98	98	75-122	0	0-21
Ethylbenzene (EPA 8020)	M	99	100	74-119	1	0-18
Xylenes, Total (EPA 8020)	M	80	80	77-124	0	0-26
1,1-Dichloroethane (EPA 8010)	M	86	86	57-152	0	0-37
1,1,1-Trichloroethane (EPA 8020)	M	93	91	42-152	2	0-24
cis-1,3-Dichloropropene (EPA 8010)	M	77	79	73-136	2	0-22
Chlorobenzene (EPA 8010)	M	74	78	63-144	4	0-24

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

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RECEIVED
AUG 2
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/18/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	5369
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	8/10/93
Project Address:	City of Industry, CA	Date Analyzed:	8/13/93
		Physical State:	Liquid

Sample ID	Benzene EPA 8020 µg/l	Toluene EPA 8020 µg/l	Ethylbenzene EPA 8020 µg/l	Xylenes, Total EPA 8020 µg/l
93GWEQ012B	ND	ND	ND	ND
93GWMW072B	ND	ND	ND	ND
93GWMW172B	ND	ND	ND	ND
Quantitation Limits µg/l	1.0	1.0	1.0	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/18/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	5369
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	8/10/93
Project Address:	City of Industry, CA	Date Analyzed:	8/13/93
		Physical State:	Liquid

Sample ID	Benzene EPA 8020 µg/l	Toluene EPA 8020 µg/l	Ethylbenzene EPA 8020 µg/l	Xylenes, Total EPA 8020 µg/l
93GWMW062B	ND	ND	ND	ND
Quantitation Limits µg/l	2.0	2.0	2.0	2.0

ND; Not Detectable
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LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/18/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	5369
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	8/10/93
Project Address:	City of Industry, CA	Date Analyzed:	8/13/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	93GWEQ012B	93GWMW072B	93GWMW172B	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	1.0
1,1-Dichloroethene	ND	7.0	13	1.0
Methylene chloride	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	1.0
Chloroform	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	ND	1.0
Carbon tetrachloride	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	1.0
Trichloroethene	ND	8.3	11	1.0
1,2-Dichloropropane	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	1.0
Tetrachloroethene	ND	3.9	3.1	1.0
Dibromochloromethane	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	1.0
Bromoform	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	1.0

ND; Not Detectable
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LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/18/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	5369
		Client P.N.:	2455

Project Name:	Calmar	Date Sampled:	8/10/93
Project Address:	City of Industry, CA	Date Analyzed:	8/13/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	93GWMW062B	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Trichlorofluoromethane	ND	2.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
1,1-Dichloroethene	7.3	2.0
Methylene chloride	ND	10
trans-1,2-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	2.0
cis-1,2-Dichloroethene	ND	2.0
Chloroform	ND	2.0
1,1,1-Trichloroethane	ND	2.0
Carbon tetrachloride	ND	2.0
1,2-Dichloroethane	ND	2.0
Trichloroethene	110	2.0
1,2-Dichloropropane	ND	2.0
Bromodichloromethane	ND	2.0
cis-1,3-Dichloropropene	ND	2.0
trans-1,3-Dichloropropene	ND	2.0
1,1,2-Trichloroethane	ND	2.0
Tetrachloroethene	11	2.0
Dibromochloromethane	ND	2.0
Chlorobenzene	ND	2.0
Bromoform	ND	2.0
1,1,2,2-Tetrachloroethane	ND	2.0
1,3-Dichlorobenzene	ND	2.0
1,4-Dichlorobenzene	ND	2.0
1,2-Dichlorobenzene	ND	2.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

5369

Project No.: 2455	Field Logbook No.:	Date: 8-10-93	Serial No.: № N- 3179
Project Name: CALMAR	Project Location: City of Industry		
Sampler (Signature):			Samplers: SAF

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010 8020				HOLD	RUSH	REMARKS
936WEQ012B	8-10	11:20	IC32375	4	H_2O			X						*WIP program in process
936WMW072B	8-10	1:50	IC32376	4	"			X						
936WMW172B	8-10	2:00	IC32377	4	"			X						
936WMW062B	8-10	4:30	IC32378	4	"			X						*All questions & results to Don Eley
Trip Blank	8-9		IC32379	2	"							X		

RELINQUISHED BY: (Signature) [signature]	DATE 8-10-93	TIME 6:00	RECEIVED BY: (Signature) [signature]	DATE 8-10-93	TIME 1800
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
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:

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

FORM NO. 86/COC/ARF

Corporate Office
1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274
Arizona Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602.437.9367 ▲ Fax 602.437.9362

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	12/13/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6038
		Client P.N.:	2455.14
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	11/30/93
Project Address:	N/A	Date Received:	11/30/93
		Date Analyzed:	12/4/93-12/8/93
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1,1-Dichloroethane (EPA 8010)	M	88	78	73-121	12	0-18
1,1,1-Trichloroethane (EPA 8010)	M	92	82	72-126	12	0-15
Cis-1,3-Dichloropropene (EPA 8010)	M	73	77	58-124	5	0-22
Chlorobenzene (EPA 8010)	M	75	76	52-131	1	0-42

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

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The Laboratory Results are only a portion of the Laboratory Report.

RECEIVED
DEC 29 1993
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	12/13/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6038
		Client P.N.:	2455.14
Project Name:	Calmar	Date Sampled:	11/30/93
Project Address:	N/A	Date Analyzed:	12/4/93-12/8/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-6	P-2	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	1.0
Vinyl chloride	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
1,1-Dichloroethene	ND	45	1.0
Methylene chloride	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	ND	8.3	1.0
cis-1,2-Dichloroethene	ND	11	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	1.0
Carbon tetrachloride	ND	ND	1.0
1,2-Dichloroethane	ND	ND	1.0
Trichloroethene	250	210	5.0
1,2-Dichloropropane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene	5.0	11	1.0
Dibromochloromethane	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
Bromoform	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	12/13/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6038
		Client P.N.:	2455.14
Project Name:	Calmar	Date Sampled:	11/30/93
Project Address:	N/A	Date Analyzed:	12/3/93-12/8/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-7	MW-1	MW-4	EB-1	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	7.7	3.5	1.3	ND	1.0
Methylene chloride	ND	ND	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	1.5	1.7	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	11	8.0	2.7	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	4.9	12	10	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	12/13/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6038
		Client P.N.:	2455.14
Project Name:	Calmar	Date Sampled:	11/30/93
Project Address:	N/A	Date Analyzed:	12/4/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-3	MW-30	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	1.0
Vinyl chloride	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
1,1-Dichloroethene	17	16	1.0
Methylene chloride	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	1.0	ND	1.0
cis-1,2-Dichloroethene	ND	ND	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane	2.5	2.5	1.0
Carbon tetrachloride	ND	ND	1.0
1,2-Dichloroethane	ND	ND	1.0
Trichloroethene	19	19	1.0
1,2-Dichloropropane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene	360	320	5.0
Dibromochloromethane	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
Bromoform	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN-OF-CUSTODY RECORD

Client: Levine - Fricke

Date: 11/30/93

Page 1 of 1

Project Name: CALMAR

Client Reference #: 2455.

Lab Use Only
Lab Job # 6038
C.O. #
C.O. #
C.O. #
C.O. #
Sample Condition Upon Receipt:
Chilled ☒ yes ☐ no
Sealed ☐ yes ☒ no

Project Address

Project Contact (please print): Don Eley

Turn Around Requested:
- ☐ Immediate Attention
- ☐ Rush 24-48 Hours
- ☐ Rush 48-96 Hours
- ☒ Normal
- ☐ Mobile Lab

Analysis Requested
All analyses and deliverables must be identified (see section 4.8 & 4.9 on reverse)

Sample ID	Sample Location	Date	Time	Physical State: Solid (S), Liquid (L), Vapor (V)	Voc / 8020							Hold	Number of Containers	Container/Comments	Lab Sample Number
mw-6		11/30/93	10:48	L	X								5	RWQCB -	IC42365
mw-7		↓	10:56	↓	X								5	WIP PROJECT	IC42366
mw-1			12:24		X								5		IC42367
mw-3			3:09		X								5		IC42368
P-2			3:36		X								5		IC42369
mw-4			4:06		X								4		IC42370
mw-30			—		X								5		IC42371
EP-1			2:26		X								2		IC42372
~~Field~~ Trip Bl.			—									X	2		IC42373

❶ Relinquished by (signature)*	❷ Received by (signature)	Date	Total Number of Containers 38
Company: Levine Fricke	Company	Time	
❸ Relinquished by (signature)*	❹ Received by Laboratory (signature)	Date: 11/30/93	
Company	Laboratory Name: TTL	Time: 17:25	

Special Instructions

*See Terms And Conditions (section 2) on reverse **before** signing

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LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	12/13/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6051.1
		Client P.N.:	2455.14
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	12/1/93
Project Address:	N/A	Date Received:	12/1/93
		Date Analyzed:	12/4/93-12/8/93
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1,1-Dichloroethane (EPA 8010)	M	88	78	73-121	12	0-18
1,1,1-Trichloroethane (EPA 8010)	M	92	82	72-126	12	0-15
Cis-1,3-Dichloropropene (EPA 8010)	M	73	77	58-124	5	0-22
Chlorobenzene (EPA 8010)	M	75	76	52-131	1	0-42

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
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The Laboratory Results are only a portion of the Laboratory Report.

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DEC 29 1993
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	12/13/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6051.1
		Client P.N.:	2455.14
Project Name:	Calmar	Date Sampled:	12/1/93
Project Address:	N/A	Date Analyzed:	12/4/93-12/8/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-5	P-3	P-1	EB-2	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	ND	ND	69	ND	1.0
Methylene chloride	ND	ND	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	2.5	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	1.5	4.3	7.5	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	4.2	5.7	20	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	12/13/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6051.1
		Client P.N.:	2455.14
Project Name:	Calmar	Date Sampled:	12/1/93
Project Address:	N/A	Date Analyzed:	12/4/93
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-2	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	26	1.0
Methylene chloride	ND	10
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	4.2	1.0
cis-1,2-Dichloroethene	1.7	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	13	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	200	5.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	6.2	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN-OF-CUSTODY RECORD

Client: Levine Fricke

Date: 12/1/93

Project Name: CALMAR

Client Reference #: 2455

Project Address:

Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 48-96 Hours
- [x] Normal
- [ ] Mobile Lab

Project Contact (please print): Dan Eley

Analysis Requested
All analyses and deliverables must be identified
(see section 4.8 & 4.9 on reverse)

Page 1 of 1

Lab Use Only
Lab Job # 6051
C.O. #
C.O. #
C.O. #
C.O. #

Sample Condition Upon Receipt:
Chilled [x] yes [ ] no
Sealed [ ] yes [x] no

Sample ID	Sample Location	Date	Time	Physical State: Solid (S), Liquid (L), Vapor (V)	8010 / 8020								Hold	Number of Containers	Container/Comments	Lab Sample Number
MW-5		12/1/93	11:15	L										4	RWQCB	IC42417
P-3			11:30											4	WIP Project	IC42418
MW-2			1:25											4		IC42419
P-1			12:16											4		IC42420
EB-2			10:19											2		IC42421
P 30			—											3		IC42422
														21	Total Number of Containers 21	

❶ Relinquished by (signature)*: [signature]
Company: Levine Fricke

❷ Received by (signature):
Company:
Date:
Time:

❸ Relinquished by (signature)*:
Company:

❹ Received by Laboratory (signature): [signature]
Laboratory Name: TTL
Date: 12/1/93
Time: 14:30

Special Instructions:

*See Terms And Conditions (section 2) on reverse **before** signing

TRUM TRUL LABS

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Phoenix Office
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Tel 602 437 9367 ▲ Fax 602 437 9362

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	4/8/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6635
		Client P.N.:	2455.09
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	3/28/94
Project Address:	N/A	Date Received:	3/28/94
		Date Analyzed:	4/1/94-4/5/94
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1,1-Dichloroethane (EPA 8010)	M	109	111	73-121	2	0-18
1,1,1-Trichloroethane (EPA 8010)	M	106	109	72-126	3	0-15
cis-1,3-Dichloropropene (EPA 8010)	M	109	111	58-124	2	0-22
Chlorobenzene (EPA 8010)	M	97	102	52-131	6	0-42

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by Terra Tech Labs, Inc. in acceptable state, intact and accompanied by the Chain-of-Custody Record.
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The Laboratory Results are only a portion of the Laboratory Report.

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LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/8/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6635
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	3/28/94
Project Address:	N/A	Date Analyzed:	4/1/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-5-394	MW-4-394	MW-1-394	P-3-394	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	ND	2.7	5.2	1.1	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	2.8	2.6	1.1	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	ND	5.8	9.9	4.5	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	1.1	16	18	8.0	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/8/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6635
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	3/28/94
Project Address:	N/A	Date Analyzed:	4/1/94-4/5/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-7-394	P-300-394	MW-6-394	EB-1-394	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	6.5	1.7	ND	ND	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	1.1	1.1	ND	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	9.9	4.7	1.6	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	6.6	8.0	ND	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN-OF-CUSTODY RECORD

Client Levine Fricke

Date 3/28/94

Page 1 of 1

Project Name CALMAR

Client Reference # 2455.09

Project Address —

Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 48-96 Hours
- [x] Normal
- [ ] Mobile Lab

Project Contact (please print) Don Eley

Analysis Requested
All analyses and deliverables must be identified (see section 4.8 & 4.9 on reverse)

Lab Use Only
Lab Job # 6635
C.O. #
C.O. #
C.O. #
C.O. #

Sample Condition Upon Receipt:
Chilled [x] yes [ ] no
Sealed [ ] yes [x] no

Sample ID	Sample Location	Date	Time	Physical State: Solid (S), Liquid (L), Vapor (V)	8010								Number of Containers	Container/Comments	Lab Sample Number
MW-5-394		3/28/94	13:45	L	X								3	Results to	ID20856
MW-4-394			14:09		X									Don Eley	ID20857
MW-1-394			15:15		X										ID20858
P-3-394			16:05		X										ID20859
MW-7-394			16:15		X										ID20860
P-300-394			—		X										ID20861
MW-6-394			16:25		X										ID20862
EB-1-394			12:40		X										ID20863

❶ Relinquished by (signature)* [signature]	❷ Received by (signature)	Date	Total Number of Containers 24
Company Levine Fricke	Company	Time	
❸ Relinquished by (signature)*	❹ Received by Laboratory (signature) [signature]	Date 3/28/94	
Company	Laboratory Name TERRA TECH	Time 15:12 PM	

Special Instructions
Needs RWQCB Deliverables for D. Eley. [signature] 3/28/94

*See Terms And Conditions (section 2) on reverse **before** signing

TERRA TECH INC

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LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	4/12/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6639
		Client P.N.:	2455.09
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	3/29/94
Project Address:	N/A	Date Received:	3/29/94
		Date Analyzed:	4/2/94
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1,1-Dichloroethane (EPA 8010)	M	119	115	73-121	3	0-18
1,1,1-Trichloroethane (EPA 8010)	M	120	106	72-126	12	0-15
cis-1,3-Dichloropropene (EPA 8010)	M	116	94	58-124	22	0-22
Chlorobenzene (EPA 8010)	M	109	93	52-131	16	0-42

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by Terra Tech Labs, Inc. in a sealed state intact and accompanied by the Original Custody Record.

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LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/12/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6639
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	3/29/94
Project Address:	N/A	Date Analyzed:	4/2/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	P-2-394	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	57	1.0
Methylene chloride	ND	5.0
trans-1,2-Dichloroethene	1.5	1.0
1,1-Dichloroethane	9.2	1.0
cis-1,2-Dichloroethene	8.6	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	2.4	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	230	5.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	70	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/12/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6639
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	3/29/94
Project Address:	N/A	Date Analyzed:	4/2/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-3-394	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	12	1.0
Methylene chloride	ND	5.0
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	1.1	1.0
cis-1,2-Dichloroethene	1.2	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	2.9	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	17	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	410	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/12/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6639
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	3/29/94
Project Address:	N/A	Date Analyzed:	4/2/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW-2-394	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	40	1.0
Methylene chloride	ND	5.0
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	6.7	1.0
cis-1,2-Dichloroethene	1.9	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	20	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	260	10
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	7.3	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND, Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/12/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	6639
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	3/29/94
Project Address:	N/A	Date Analyzed:	4/2/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	P-1-394	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	90	1.0
Methylene chloride	ND	5.0
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	2.1	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	3.0	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	11	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	22	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND, Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN-OF-CUSTODY RECORD

Client LEVINE - FRICKE

Date 3-29-94

Page 1 of 1

Project Name CALMAR

Client Reference # 2455.09

Project Address

Turn Around Requested:
- ☐ Immediate Attention
- ☐ Rush 24-48 Hours
- ☐ Rush 48-96 Hours
- ☒ Normal
- ☐ Mobile Lab

Project Contact (please print) DON ELEY

Analysis Requested
All analyses and deliverables must be identified (see section 4.8 & 4.9 on reverse)

Lab Use Only
Lab Job # 66639
C.O. #
C.O. #
C.O. #
C.O. #

Sample Condition Upon Receipt:
Chilled ☒ yes ☐ no
Sealed ☐ yes ☒ no

Sample ID	Sample Location	Date	Time	Physical State: Solid (S), Liquid (L), Vapor (V)	8010								Number of Containers	Container/Comments	Lab Sample Number
P-2-394	P-2	3/29/94	1:10	L	X								3		ID20891
MW-3-394	MW-3	↓	1:22	L	X								3		ID20892
MW-2-394	MW-2	↓	1:31	L	X								3		ID20893
P-1-394	P-1	↓	1:43	L	X								3		ID20894

❶ Relinquished by (signature)*	❷ Received by (signature)	Date	Total Number of Containers: 12
Company: LEVINE FRICKE	Company	Time	
❸ Relinquished by (signature)*	❹ Received by Laboratory (signature)	Date: 3/29/94	
Company	Laboratory Name: TTL	Time: 15:25	

Special Instructions: Needs RWQCB deliverables for Don Eley. PM 3/30/94

*See Terms And Conditions (section 2) on reverse **before** signing

TRUM TRUE LABS

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Fax 714.757.7274

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Phoenix, Arizona 85034
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Orange County Office
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Tel 714 757 7022 ▲ Fax 714 757 7274
Arizona Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602 437 9367 ▲ Fax 602 437 9362

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	7/11/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	L453
		Client P.N.:	2455
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	6/21/94
Project Address:	333 Turnbull Canyon Rd. City of Industry, CA	Date Received:	6/21/94
		Date Analyzed:	6/28/94-6/29/94
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1,1-Dichloroethane (EPA 8010)	M	102	91	73-121	11	0-18
1,1,1-Trichloroethane (EPA 8010)	M	89	83	72-126	7	0-15
Cis-1,3-Dichloropropene (EPA 8010)	M	85	88	58-124	4	0-22
Chlorobenzene (EPA 8010)	M	90	85	52-131	6	0-42

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by Terra Tech Labs in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs is not an indication of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

RECEIVED
JUL
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	7/11/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	L453
		Client P.N.:	2455

Project Name:	Calmar	Date Sampled:	6/21/94
Project Address:	333 Turnbull Canyon Rd. City of Industry, CA	Date Analyzed:	6/28/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	GW-5-062194	GW-1-062194	GW-4-062194	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	1.0
1,1-Dichloroethene	ND	3.4	3.7	1.0
Methylene chloride	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	1.0
Chloroform	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	1.7	1.2	1.0
Carbon tetrachloride	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	1.0
Trichloroethene	ND	6.2	3.4	1.0
1,2-Dichloropropane	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	1.0
Tetrachloroethene	ND	14	10	1.0
Dibromochloromethane	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	1.0
Bromoform	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	7/11/94
Client Address:	1920 Main Street, Suite 750	Lab P.N.:	L453
	Irvine, CA 92714	Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	6/21/94
Project Address:	333 Turnbull Canyon Rd.	Date Analyzed:	6/28/94
	City of Industry, CA	Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	GW-P3-062194	EB-1-694	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	1.0
Vinyl chloride	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
1,1-Dichloroethene	ND	ND	1.0
Methylene chloride	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	ND	ND	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	1.0
Carbon tetrachloride	ND	ND	1.0
1,2-Dichloroethane	ND	ND	1.0
Trichloroethene	4.6	ND	1.0
1,2-Dichloropropane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene	5.7	ND	1.0
Dibromochloromethane	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
Bromoform	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	7/11/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	L453
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	6/21/94
Project Address:	333 Turnbull Canyon Rd. City of Industry, CA	Date Analyzed:	6/28/94-6/29/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	GW-P2-062194	GW-P200-062194	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	1.0
Vinyl chloride	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
1,1-Dichloroethene	47	33	1.0
Methylene chloride	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	6.3	4.4	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane	1.3	1.4	1.0
Carbon tetrachloride	ND	ND	1.0
1,2-Dichloroethane	ND	ND	1.0
Trichloroethene	98	91	5.0
1,2-Dichloropropane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene	44	48	1.0
Dibromochloromethane	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
Bromoform	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN-OF-CUSTODY RECORD

Client ~~Calmar~~ ex Levine-Fricke

Date 6/21/94

Project Name Calmar

Client Reference # 2455

Project Address 333 Turnbull Canyon Rd
City of Industry, Ca

Project Contact (please print) Don Eley

Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 48-96 Hours
- [x] Normal
- [ ] Mobile Lab

Analysis Requested
All analyses and deliverables must be identified
(see section 4.8 & 4.9 on reverse)

Page 1 of 1

Lab Use Only
Lab Job # L453
C.O. #
C.O. #
C.O. #
C.O. #

Sample Condition Upon Receipt:
Chilled [x] yes [ ] no
Sealed [ ] yes [x] no

Sample ID	Sample Location	Date	Time	Physical State: Solid (S), Liquid (L), Vapor (V)	8010								Number of Containers	Container/Comments	Lab Sample Number
GW-5-062194	City of Industry	6/21/94	11:00	L	X								3	Any Questions	L453-1
GW-1-062194			11:15	L	X								3	Contact Don	L453-2
GW-4-062194			14:45	L	X								3	Eley @ (714)	L453-3
GW-P2-062194			15:05	L	X								3	955-1390	L453-4
GW-P3-062194			15:30	L	X								3		L453-5
GW-P200-062194			15:05	L	X								3	RWQCB	L453-6
EB-1-694			12:30	L	X								3	Deliverables	L453-7
													21	Total Number of Containers	

❶ Relinquished by (signature) [signature] II	❷ Received by (signature)	Date
Company	Company	Time
❸ Relinquished by (signature)*	❹ Received by laboratory (signature) [signature]	Date 6/21/94
Company	Laboratory Name TTL	Time 16:30

Special Instructions

*See Terms And Conditions (section 2) on reverse **before** signing

Corporate Office
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Tel 714.757.7022 ▲ Fax 714.757.7274
Arizona Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602.437.9367 ▲ Fax 602.437.9362

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	7/5/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	L458A1
		Client P.N.:	2455.09
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	6/22/94
Project Address:	City of Industry, CA	Date Received:	6/22/94
		Date Analyzed:	6/29/94
		Physical State:	Liquid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1,1-Dichloroethane (EPA 8010)	M	108	91	73-121	11	0-18
1,1,1-Trichloroethane (EPA 8010)	M	89	83	72-126	7	0-15
Cis-1,3-Dichloropropene (EPA 8010)	M	85	88	58-124	4	0-22
Chlorobenzene (EPA 8010)	M	90	85	52-131	6	0-42

Note: This report was amended on 7/21/94 to reflect correction of compounds reported for sample GW-2-062294.

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by Terra Tech Labs in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs is not an indication of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

RECEIVED
JUL 21 1994
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	7/5/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	L458A1
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	6/22/94
Project Address:	City of Industry, CA	Date Analyzed:	6/29/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	GW-3-062294	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	16	1.0
Methylene chloride	ND	5.0
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	1.6	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	11	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	160	5.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	7/5/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	L458A1
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	6/22/94
Project Address:	City of Industry, CA	Date Analyzed:	6/29/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	GW-P1-062294	GW-6-062294	GW-7-062294	GW-600-062294	
Parameters	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	68	4.5	7.0	3.2	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	1.7	ND	ND	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	8.4	55	7.1	48	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	18	6.3	5.2	5.9	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	7/5/94
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	L458A1
		Client P.N.:	2455.09
Project Name:	Calmar	Date Sampled:	6/22/94
Project Address:	City of Industry, CA	Date Analyzed:	6/29/94
		Physical State:	Liquid

Halogenated Volatile Organics, EPA 8010

Sample ID	GW-2-062294	
Parameters	Conc. (µg/l)	Quantitation Limits (µg/l)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	22	1.0
Methylene chloride	ND	5.0
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	4.8	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	12	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	130	5.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	4.2	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN-OF-CUSTODY RECORD

Client Levine Fricke

Date 6-22-94

Page 1 of 1

Project Name CALMAK

Client Reference # 2455.09

Lab Use Only
Lab Job # L458
C.O. #
C.O. #
C.O. #
C.O. #

Project Address City of Industry

Turn Around Requested:
- ☐ Immediate Attention
- ☐ Rush 24-48 Hours
- ☐ Rush 48-96 Hours
- ☒ Normal
- ☐ Mobile Lab

Project Contact (please print) Donald Eley

Sample Condition Upon Receipt:
Chilled ☒ yes ☐ no
Sealed ☐ yes ☒ no

Analysis Requested
All analyses and deliverables must be identified
(see section 4.8 & 4.9 on reverse)

Sample ID	Sample Location	Date	Time	Physical State: Solid (S), Liquid (L), Vapor (V)	8010								Number of Containers	Container/Comments	Lab Sample Number
GW-3-062294		6-22-94	10:20	L	X								3		L458-1
GW-P1-062294			10:25		X								3		L458-2
GW-6-062294			11:10		X								3		L458-3
GW-7-062294			11:20		X								3		L458-4
GW-600-062294			—		X								3		L458-5
GW-2-062294			13:12		X								3		L458-6

❶ Relinquished by (signature)*	❷ Received by (signature)	Date	Total Number of Containers 18
Company: Levine Fricke	Company	Time	
❸ Relinquished by (signature)*	❹ Received by Laboratory (signature)	Date 6/22/94	
Company	Laboratory Name TTC	Time 14:30	

Special Instructions
Results to Don Eley, RWQCB reporting.

Corporate Office
1920 E. Deere Ave., Suite 130
Santa Ana, CA 92705
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Soil Vapor

TERRA TECH LABS

1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
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SOIL GAS INVESTIGATION

prepared under the direction of Levine-Fricke for:

Calmar Facility
City of Industry, CA

prepared by:

Terra Tech Labs, Inc.
1290 East Deere Avenue, Suite 130
Santa Ana, CA 92705

April 26, 1993

Brian K. Kato, Engineer

Rashmi Shah, Laboratory Director

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LEVINE-FRICKE

Introduction

On April 14, 1993, Terra Tech Labs was subcontracted by Levine-Fricke to collect and analyze soil gas samples from pre-installed vapor sampling points at the Calmar Facility in the City of Industry, California. Twenty-eight (28) vapor samples were collected under Levine-Fricke's direction and analyzed for the twenty-two target analytes as specified by the Los Angeles Regional Water Quality Control Board (LARWQCB). The samples were analyzed via one of Terra Tech Labs' mobile laboratories using a gas chromatograph (GC) equipped with electrolytic conductivity detector (ELCD) and a photoionization detector (PID). The analytical results and Chain-of-Custody Records are attached for your review.

Sampling Methodology

Each sampling location consisted of five to six nested sampling terminals (1/4" outer diameter teflon tubing) corresponding to varying sampling depths. To collect a sample, the sampling terminal was connected to the vacuum pump (Dayton Model 4Z337, 3/4 HP) and the soil gas was then drawn from the ground. The gas flow was controlled by a regulated flowmeter to insure that the desired flow was achieved, and the purge time was measured. When the optimal volume (see description of purge volume test below) was purged from the ground, the sample was collected from the teflon tubing, upstream of the vacuum pump inlet, with a gas tight syringe and was immediately analyzed.

Discussion of the Purge Volume Test

The purpose of the purge volume test is to determine the effect of the drawn or purge volume on the detected analyte concentration. Three samples were collected and analyzed at a location (NVP4-1) containing a quantifiable concentration of analyte after one, two and three probe volumes had been purged through the sampling system. The concentrations of tetrachloethene for the samples were 42 µg/l, 78 µg/l, and 79 µg/l, respectively. Since these concentrations did not vary significantly between two and three probe volumes, two probe volumes were purged through the sampling system prior to each sample collection.

Analytical Methodology

The samples were analyzed using a Hewlett Packard 5890 GC equipped with the following detectors: ELCD and PID. A 10 ml aliquot of sample was introduced into the analytical system. Compounds were separated using a 75M x 0.53mm DB624 megabore column and quantified using a multiple level calibration of standards. Prior to sample analysis, air blanks were analyzed to check for system contamination. Approximately 10 nanograms of the target compounds could be detected by the analytical system. With a 10 ml aliquot of sample, a quantitation limit of 1.0 µg/l was achieved. All quality control was performed in accordance with the approved LARWQCB analytical protocol. Refer to Appendix B for a complete set of analytical results.

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: April 14,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	# of Purge Vols.	Purge Vol. (ml)	Vacuum (In. of Hg)	Sample Time	Injection Time	Injection Vol. (µl)	Carbon Tetrachloride		Chlorobenzene		Chloroethane		Dibromochloromethane	
								Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP1-1	4	1	22	18	8:15	8:15	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4	2	43	18	8:39	8:39	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4	3	65	18	9:03	9:03	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36	1	195	18	9:27	9:27	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36	2	391	18	9:52	9:52	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36	3	586	18	10:16	10:16	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4	1	27	18	10:40	10:40	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4	2	54	18	11:03	11:03	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4	3	81	18	11:28	11:28	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12	1	65	18	11:54	11:54	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17	1	92	18	12:18	12:18	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17	2	185	18	12:43	12:43	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-4	25.5	2	277	18	13:21	13:21	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-6	41	1	223	18	13:46	13:46	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-1	8	2	87	18	14:10	14:10	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-2	12	1	65	18	14:34	14:34	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-3	18	2	195	18	14:56	14:56	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-4	25.5	2	277	18	15:22	15:22	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-5	34.5	1	187	18	15:46	15:46	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-1	4	2	43	18	16:10	16:10	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-2	11	2	119	18	16:34	16:34	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-3	22.5	2	244	18	16:56	16:56	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-4	31	2	337	18	17:41	17:41	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-5	37	2	402	18	18:04	18:04	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-2	11	2	119	18	18:26	18:26	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-3	18	2	195	18	18:46	18:46	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-4	31	2	337	18	19:10	19:10	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-5	39	1	424	18	19:32	19:32	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

RECEIVED

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: April 14,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	Dichlorodifluoromethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		1,2-Dichloroethene (c & t)		Dichloromethane	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)	504055	5.3		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)	504918	5.3		ND (<1.0)		ND (<1.0)
NVP4-4	25.5		ND (<1.0)		ND (<1.0)		ND (<1.0)	1356748	14		ND (<1.0)		ND (<1.0)
NVP4-6	41		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP3-1	8		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP3-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP3-3	18		ND (<1.0)	195030	2.8		ND (<1.0)	3790666	40		ND (<1.0)		ND (<1.0)
NVP3-4	25.5		ND (<1.0)	479400	6.8		ND (<1.0)	4400660	46		ND (<1.0)		ND (<1.0)
NVP3-5	34.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP2-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)	2948373	31		ND (<1.0)		ND (<1.0)
NVP2-2	11		ND (<1.0)	656342	9.4		ND (<1.0)	4903107	52		ND (<1.0)		ND (<1.0)
NVP2-3	22.5		ND (<1.0)	646182	9.2		ND (<1.0)	4355210	46		ND (<1.0)		ND (<1.0)
NVP2-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)	2299231	24		ND (<1.0)		ND (<1.0)
NVP2-5	37		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP1-2	11		ND (<1.0)		ND (<1.0)		ND (<1.0)	2969342	31		ND (<1.0)		ND (<1.0)
NVP1-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)
NVP1-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)	3824827	40		ND (<1.0)		ND (<1.0)
NVP1-5	39		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: April 14,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	1,1,2,2-Tetrachloroethane		1,1,1,2-Tetrachloroethane		Tetrachloroethene		1,1,1-Trichloroethane		1,1,2-Trichloroethane		Trichloroethene	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)	1824570	18	1510039	16		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)	1355875	14		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)	1161778	12		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)	4140342	42		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)	7670967	78	3763702	39		ND (<1.0)	440905	4.5
NVP4-1	4		ND (<1.0)		ND (<1.0)	7801130	79	3695194	38		ND (<1.0)	464743	4.7
NVP4-2	12		ND (<1.0)		ND (<1.0)	8168240	83	4065587	42		ND (<1.0)	520714	5.3
NVP4-3	17		ND (<1.0)		ND (<1.0)	4335261	44	1008886	10		ND (<1.0)	485978	5.0
NVP4-3	17		ND (<1.0)		ND (<1.0)	10112978	102	1014718	11		ND (<1.0)	576158	5.9
NVP4-4	25.5		ND (<1.0)		ND (<1.0)	8051996	81	1344250	14		ND (<1.0)	396417	4.0
NVP4-6	41		ND (<1.0)		ND (<1.0)	1925206	19	1370766	14		ND (<1.0)		ND (<1.0)
NVP3-1	8		ND (<1.0)		ND (<1.0)	828833	8.4	2810044	29		ND (<1.0)		ND (<1.0)
NVP3-2	12		ND (<1.0)		ND (<1.0)	566444	5.7	633576	6.6		ND (<1.0)		ND (<1.0)
NVP3-3	18		ND (<1.0)		ND (<1.0)	1485851	15	4141115	43		ND (<1.0)	1361865	14
NVP3-4	25.5		ND (<1.0)		ND (<1.0)	2012579	20	6122228	64		ND (<1.0)	3004898	31
NVP3-5	34.5		ND (<1.0)		ND (<1.0)	480518	4.9	4547693	47		ND (<1.0)		ND (<1.0)
NVP2-1	4		ND (<1.0)		ND (<1.0)	424783	4.3	2811042	29		ND (<1.0)	391927	4.0
NVP2-2	11		ND (<1.0)		ND (<1.0)	650236	6.6	5201387	54		ND (<1.0)	1627680	17
NVP2-3	22.5		ND (<1.0)		ND (<1.0)		ND (<1.0)	4900754	51		ND (<1.0)	207404	2.1
NVP2-4	31		ND (<1.0)		ND (<1.0)	316998	3.2	993549	10		ND (<1.0)	2345051	24
NVP2-5	37		ND (<1.0)		ND (<1.0)		ND (<1.0)	128428	1.3		ND (<1.0)		ND (<1.0)
NVP1-2	11		ND (<1.0)		ND (<1.0)	214662	2.2	430129	4.5		ND (<1.0)		ND (<1.0)
NVP1-3	18		ND (<1.0)		ND (<1.0)	196884	2.0		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-4	31		ND (<1.0)		ND (<1.0)	318095	3.2		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-5	39		ND (<1.0)		ND (<1.0)	183806	1.9		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: April 14,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	Trichlorofluoromethane		Vinyl Chloride		Benzene		Ethylbenzene		Toluene		Total Xylenes	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-4	25.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-6	41		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-1	8		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-4	25.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-5	34.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-2	11		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-3	22.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-5	37		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-2	11		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-5	39		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

TERRA TECH LABS Inc.
ENVIRONMENTAL TESTING
18011 Beach Ave., Suite 130
Santa Ana, CA 92705
Tel 714 757 7022
Fax 714 757 7274

Chain-Of-Custody Record

Client: LEVINE • FRICKE
Date: 04/14/93
Project Name: CALMAR
Client Project #: 2455.07
Project Address: CITY of INDUSTRY
Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 72-96 Hours
- [ ] Normal
- [x] Mobile Lab

Project Contact: DON ELEY

TTL Project #:
Page 1 of 3
Lab Use Only
Sample Condition as Received:
Chilled [ ] yes [ ] no
Sealed [ ] yes [ ] no

Analysis Requested: VAPOR (V); LARWQCB TARGET 22 COMPOUNDS

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A)	VAPOR (V)	LARWQCB TARGET 22 COMPOUNDS								Number of Containers	Container/Comments
NVP1-1		04/14/93	815		V	✓									1	10 ml syringe
NVP1-1		"	839		V	✓									1	"
NVP1-1		"	903		V	✓									1	
NVP4-5		"	927		V	✓									1	
NVP4-5		"	952		V	✓									1	
NVP4-5		"	1016		V	✓									1	
NVP4-1		"	1040		V	✓									1	
NVP4-1		"	1103		V	✓									1	
NVP4-1		"	1128		V	✓									1	
NVP4-2		"	1154		V	✓									1	

❶ Relinquished by (signature)	Date	❷ Received by (signature)	Date	10	Total Number of Containers
Company	Time	Company	Time	Additional Comments	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature): Brian K. Kato	Date: 04/14/93		
Company	Time	Company: Terra Tech Labs, Inc.	Time: as above		

TERRA TECH LABS Inc
ENVIRONMENTAL TESTING

1920 E. Dieie Ave., Suite 130
Santa Ana, CA 92705
Tel 714 757 7022
Fax 714 757 7274

Chain-Of-Custody Record

Client: LEVINE-FRICKE
Date: 04/14/93
Project Name: CALMAR
Client Project #: 2455.07
Project Address: CITY OF INDUSTRY
Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 72-96 Hours
- [ ] Normal
- [x] Mobile Lab

Project Contact: DON ELEY

TTL Project #:
Page 2 of 3
Lab Use Only: Sample Condition as Received: Chilled [ ] yes [ ] no; Sealed [ ] yes [ ] no

Analysis Requested: VAPOR (V); LARWQCB TMLHET 22 COMPOUNDS

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A)									Number of Containers	Container/Comments
NVP4-3		04/14/93	1218		V	✓								1	10 ml syringe
NVP4-3		"	1243		V	✓								1	
NVP4-4		"	1321		V	✓								1	
NVP4-6		"	1346		V	✓								1	
NVP3-1		"	1410		V	✓								1	
NVP3-2		"	1434		V	✓								1	
NVP3-3		"	1466 ~~1522~~ ok		V	✓								1	
NVP3-4		"	1522 ~~1546~~ ok		V	✓								1	
NVP3-5		"	1546 ~~1610~~ ok		V	✓								1	
NVP2-1		"	1610 ~~1634~~ ok		V	✓								1	

❶ Relinquished by (signature) | Date | ❷ Received by (signature) | Date

TERRA TECH LABS Inc
ENVIRONMENTAL TESTING
1930 E. Deere Ave. Suite 130
Santa Ana, CA 92705
Tel 714 757 7022
Fax 714 757 7274

Chain-Of-Custody Record

Client: LEVINE-FRICKE
Date: 04/14/93
Project Name: CALMAR
Client Project #: 2455.07
Project Address: CITY OF INDUSTRY
Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 72-96 Hours
- [ ] Normal
- [x] Mobile Lab

Project Contact: DON ELEY

TTL Project #:
Page 3 of 3
Lab Use Only
Sample Condition as Received:
Chilled [ ] yes [ ] no
Sealed [ ] yes [ ] no

Analysis Requested: LARWQCB Target 22 Compounds

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Vapor (V)	LARWQCB Target 22 Compounds									Number of Containers	Container/Comments
NVP2-2		04/14/93	1634		V	✓									1	10 ml syringe
NVP2-3		"	1656		V	✓									1	
NVP2-4		"	1741		V	✓									1	
NVP2-5		"	1804		V	✓									1	
NVP1-2		"	~~1845~~ 1826		V	✓									1	
NVP1-3		"	1846		V	✓									1	
NVP1-4		"	1910		V	✓									1	
NVP1-5		"	1932		V	✓									1	

❶ Relinquished by (signature)	Date	❷ Received by (signature)	Date	8	Total Number of Containers
Company	Time	Company	Time	Additional Comments	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature) Brian K. Kato	Date 04/14/93		
Company	Time	Company Terra Tech Labs, Inc.	Time as above		

SOIL GAS INVESTIGATION

prepared under the direction of Levine-Fricke for:

Calmar Facility
City of Industry, CA

prepared by:

Terra Tech Labs, Inc.
1290 East Deere Avenue, Suite 130
Santa Ana, CA 92705

May 19, 1993

Brian K. Kato, Engineer

Rashmi Shah, Laboratory Director

LEVINE-FR

Introduction

On May 13, 1993, Terra Tech Labs was subcontracted by Levine-Fricke to collect and analyze soil gas samples from pre-installed vapor sampling points at the Calmar Facility in the City of Industry, California. Twenty-seven (27) vapor samples were collected under Levine-Fricke's direction and analyzed for the twenty-two target analytes as specified by the Los Angeles Regional Water Quality Control Board (LARWQCB). The samples were analyzed via one of Terra Tech Labs' mobile laboratories using a gas chromatograph (GC) equipped with electrolytic conductivity detector (ELCD) and a photoionization detector (PID). The analytical results and Chain-of-Custody Records are attached for your review.

Sampling Methodology

Each sampling location consisted of five to six nested sampling terminals (1/4" outer diameter teflon tubing) corresponding to varying sampling depths. To collect a sample, the sampling terminal was connected to the vacuum pump (Dayton Model 4Z337, 3/4 HP) and the soil gas was then drawn from the ground. The gas flow was controlled by a regulated flowmeter to insure that the desired flow was achieved, and the purge time was measured. When the optimal volume (see description of purge volume test below) was purged from the ground, the sample was collected from the teflon tubing, upstream of the vacuum pump inlet, with a gas tight syringe and was immediately analyzed.

Discussion of the Purge Volume Test

The purpose of the purge volume test is to determine the effect of the drawn or purge volume on the detected analyte concentration. Three samples were collected and analyzed at a location (NVP4-1) containing a quantifiable concentration of analyte after one, two and three probe volumes had been purged through the sampling system. The concentrations of tetrachloethene for the samples were 27 µg/l, 21 µg/l, and 1.3 µg/l, respectively. Since these concentrations did not vary significantly between one and two probe volumes, two probe volumes were purged through the sampling system prior to each sample collection.

Analytical Methodology

The samples were analyzed using a Hewlett Packard 5890 GC equipped with the following detectors: ELCD and PID. A 10 ml aliquot of sample was introduced into the analytical system. Compounds were separated using a 75M x 0.53mm DB624 megabore column and quantified using a multiple level calibration of standards. Prior to sample analysis, air blanks were analyzed to check for system contamination. Approximately 10 nanograms of the target compounds could be detected by the analytical system. With a 10 ml aliquot of sample, a quantitation limit of 1.0 µg/l was achieved. All quality control was performed in accordance with the approved LARWQCB analytical protocol. Refer to Appendix B for a complete set of analytical results.

Appendix A

TERRA TECH LABS Inc.
ENVIRONMENTAL TESTING
1920 E. Deere Ave., Suite 130
Santa Ana, CA 92705
Tel 714.757.7022
Fax 714 757 7274

Chain-Of-Custody Record

Client: LEVINE-FRICKE
Date: 05/13/93
Project Name: CALMAR
Client Project #:
Project Address: City of Industry
Project Contact: Don Eley
Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 72-96 Hours
- [ ] Normal
- [x] Mobile Lab

TTL Project #:
Page: 01 of 03
Lab Use Only: Sample Condition as Received: Chilled [ ] yes [ ] no; Sealed [ ] yes [ ] no

Analysis Requested: Vapor CV; RWQCB Target 22

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A)	Vapor CV	RWQCB Target 22								Number of Containers	Container/Comments
NVP4-1	1 probe volume	05/13/93	725		V	x									1	10 ml syringe
NVP4-1	2 probe volumes		754		V	x									1	
NVP4-1	3 probe volumes		824		V	x									1	
NVP4-5	1 probe volume		853		V	x									1	
NVP4-5	2 probe volumes		921		V	x									1	
NVP4-5	3 probe volumes		951		V	x									1	
NVP4-2			1023		V	x									1	
NVP4-3			1055		V	x									1	
NVP4-4			1327		V	x									1	
NVP4-6			1357		V	x									1	

❶ Relinquished by (signature)	Date	❷ Received by (signature)	Date	10 Total Number of Containers
Company	Time	Company	Time	Additional Comments
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature) (SAMPLER) Boran Kato	Date 05/13/93	
Company	Time	Company Terra Tech Labs, Inc	Time as above	

TERRA TECH LABS Inc.
ENVIRONMENTAL TESTING
1920 E. Deere Ave., Suite 130
Santa Ana, CA 92705
Tel 714.757.7022
Fax 714.757.7274

Chain-Of-Custody Record

Client: LEVINE - FRICKE
Date: 05/13/93
Project Name: CALMAR
Client Project #:
Project Address: City of Industry
Project Contact: Don Eley
Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 72-96 Hours
- [ ] Normal
- [x] Mobile Lab

TTL Project #:
Page: 02 of 03
Lab Use Only
Sample Condition as Received:
Chilled [ ] yes [ ] no
Sealed [ ] yes [ ] no

Analysis Requested: RWQCB Target 22

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Vapor (V)	RWQCB Target 22								Number of Containers	Container/Comments
NVP2-1		05/13/93	1422		V	+								1	10 ml syringe
NVP2-2			1452		V	+								1	
NVP2-3			1522		V	+								1	
NVP2-4			1553		V	+								1	
NVP2-5			1623		V	+								1	
NVP1-1			1646		V	+								1	
NVP1-2			1708		V	+								1	
NVP1-3			1731		V	+								1	
NVP1-4			1753		V	+								1	
NVP1-5			1816		V	+								1	

❶ Relinquished by (signature)	Date	❷ Received by (signature)	Date	10	Total Number of Containers
Company	Time	Company	Time	Additional Comments	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature) (SAMPLER) Brian Kath	Date 05/13/93		
Company	Time	Company TerraTech Labs, Inc	Time as above		

TERRA TECH LABS Inc.
ENVIRONMENTAL TESTING
1920 E. Deere Ave., Suite 130
Santa Ana, CA 92705
Tel 714 757 7022
Fax 714 757 7274

Chain-Of-Custody Record

Client: LEVINE FRICKE
Date: 05/13/93
Project Name: CALMAR
Client Project #:
Project Address: City of Industry
Project Contact: Don Eley
Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 72-96 Hours
- [ ] Normal
- [x] Mobile Lab

TTL Project #:
Page: 03 of 03
Lab Use Only
Sample Condition as Received:
Chilled [ ] yes [ ] no
Sealed [ ] yes [ ] no

Analysis Requested

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Vapor (V)	RWQCB Target 22								Number of Containers	Container/Comments
NVP4-2		05/13/93	1838		V	x								1	10 ml Syringe
NVP4-3			1900		V	x								1	
NVP3 1			1922		V	x								1	
NVP3 2			1944		V	x								1	
NVP3 3			2008		V	x								1	
NVP3 4			2027		V	x								1	
NVP3 5			2050		V	x								1	

❶ Relinquished by (signature)	Date	❷ Received by (signature)	Date	27	Total Number of Containers
Company	Time	Company	Time	Additional Comments	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature) (SAMPLER) Brian Cate	Date 05/13/93		
Company	Time	Company Terra Tech Labs, Inc.	Time as above		

Appendix B

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: May 13,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	# of Purge Vols.	Purge Vol. (ml)	Vacuum (In. of Hg)	Sample Time	Injection Time	Injection Vol. (µl)	Carbon Tetrachloride		Chlorobenzene		Chloroethane		Dibromochloromethane	
								Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP4-1	4	1	22	18	7:25	7:25	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4	2	43	18	7:54	7:54	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4	3	65	18	8:24	8:24	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36	1	195	18	8:53	8:53	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36	2	391	18	9:21	9:21	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36	3	586	18	9:51	9:51	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12	2	130	18	10:23	10:23	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17	2	185	18	10:55	10:55	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-4	25.5	2	277	18	13:27	13:27	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-6	41	2	445	18	13:57	13:57	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-1	4	2	43	18	14:22	14:22	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-2	11	2	119	18	14:52	14:52	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-3	22.5	2	244	18	15:22	15:22	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-4	31	2	337	18	15:53	15:53	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-5	37	2	402	18	16:23	16:23	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4	2	43	18	16:46	16:46	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-2	11	2	119	18	17:08	17:08	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-3	18	2	195	18	17:31	17:31	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-4	31	2	337	18	17:53	17:53	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-5	39	2	424	18	18:16	18:16	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12	2	130	18	18:38	18:38	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17	2	185	18	19:00	19:00	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-1	8	2	87	18	19:22	19:22	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-2	12	2	130	18	19:44	19:44	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-3	18	2	195	18	20:08	20:08	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-4	25.5	2	277	18	20:27	20:27	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-5	34.5	2	375	18	20:50	20:50	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: May 13,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	Dichlorodifluoromethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		1,2-Dichloroethene (c & t)		Dichloromethane	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)	373651	1.5		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)	156182	ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)	125432	ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12		ND (<1.0)	94430	ND (<1.0)		ND (<1.0)	840858	3.3		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)	85718	ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-4	25.5		ND (<1.0)		ND (<1.0)		ND (<1.0)	2828682	11.3		ND (<1.0)		ND (<1.0)
NVP4-6	41		ND (<1.0)		ND (<1.0)		ND (<1.0)	224795	ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-2	11		ND (<1.0)	3121998	12		ND (<1.0)	10339273	41		ND (<1.0)		ND (<1.0)
NVP2-3	22.5		ND (<1.0)	3062448	12		ND (<1.0)	9915581	39		ND (<1.0)		ND (<1.0)
NVP2-4	31		ND (<1.0)	534921	2.1		ND (<1.0)	9683960	39		ND (<1.0)		ND (<1.0)
NVP2-5	37		ND (<1.0)	499390	1.9		ND (<1.0)	5125016	20		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)	6483588	26		ND (<1.0)		ND (<1.0)
NVP1-2	11		ND (<1.0)		ND (<1.0)		ND (<1.0)	7909126	31		ND (<1.0)		ND (<1.0)
NVP1-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)	6952505	28		ND (<1.0)		ND (<1.0)
NVP1-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)	13819627	55		ND (<1.0)		ND (<1.0)
NVP1-5	39		ND (<1.0)		ND (<1.0)		ND (<1.0)	9562933	38		ND (<1.0)		ND (<1.0)
NVP4-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)	340728	1.4		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)	2748550	11		ND (<1.0)		ND (<1.0)
NVP3-1	8		ND (<1.0)	714178	2.7		ND (<1.0)	3130788	12		ND (<1.0)		ND (<1.0)
NVP3-2	12		ND (<1.0)	400575	1.5		ND (<1.0)	1087873	4.3		ND (<1.0)		ND (<1.0)
NVP3-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)	681624	2.7		ND (<1.0)		ND (<1.0)
NVP3-4	25.5		ND (<1.0)	1150251	4.4		ND (<1.0)	5432064	22		ND (<1.0)		ND (<1.0)
NVP3-5	34.5		ND (<1.0)	861961	3.3		ND (<1.0)	6772728	27		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: May 13,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	1,1,2,2-Tetrachloroethane		1,1,1,2-Tetrachloroethane		Tetrachloroethene		1,1,1-Trichloroethane		1,1,2-Trichloroethane		Trichloroethene	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP4-1	4		ND (<1.0)		ND (<1.0)	9951635	27	1130026	3.6		ND (<1.0)	438937	1.5
NVP4-1	4		ND (<1.0)		ND (<1.0)	7509746	21	150858	ND (<1.0)		ND (<1.0)	177478	ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)	458318	1.3		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)	3692542	10.2	5672809	18		ND (<1.0)	216361	ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)	1919803	5.3	1405627	4.5		ND (<1.0)	91465	ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)	1390662	3.8	960580	3.1		ND (<1.0)	63111	ND (<1.0)
NVP4-2	12		ND (<1.0)		ND (<1.0)	9920032	27	7713061	25		ND (<1.0)	868813	2.9
NVP4-3	17		ND (<1.0)		ND (<1.0)	6233758	17	132715	ND (<1.0)		ND (<1.0)	61006	ND (<1.0)
NVP4-4	25.5		ND (<1.0)		ND (<1.0)	27582064	76	3814662	12		ND (<1.0)	3688713	12
NVP4-6	41		ND (<1.0)		ND (<1.0)	6353035	18	5699109	18		ND (<1.0)	416552	1.4
NVP2-1	4		ND (<1.0)		ND (<1.0)	487673	1.3		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-2	11		ND (<1.0)		ND (<1.0)	3551540	9.8	9473281	30		ND (<1.0)	5801829	20
NVP2-3	22.5		ND (<1.0)		ND (<1.0)	2427935	6.7	12159936	39		ND (<1.0)	4803558	16
NVP2-4	31		ND (<1.0)		ND (<1.0)	1268934	3.5	9279397	30		ND (<1.0)	5701665	19
NVP2-5	37		ND (<1.0)		ND (<1.0)	692370	1.9	4575260	15		ND (<1.0)	2091656	7.1
NVP1-1	4		ND (<1.0)		ND (<1.0)	980159	2.7	814987	2.6		ND (<1.0)	269463	ND (<1.0)
NVP1-2	11		ND (<1.0)		ND (<1.0)	765024	2.1	1648088	5.3		ND (<1.0)	321523	1.1
NVP1-3	18		ND (<1.0)		ND (<1.0)	827459	2.3	730368	2.3		ND (<1.0)	402098	1.4
NVP1-4	31		ND (<1.0)		ND (<1.0)	1011777	2.8		ND (<1.0)		ND (<1.0)	831589	2.8
NVP1-5	39		ND (<1.0)		ND (<1.0)	471362	1.3		ND (<1.0)		ND (<1.0)	1087063	3.7
NVP4-2	12		ND (<1.0)		ND (<1.0)	10110592	28	2576802	8.2		ND (<1.0)	509933	1.7
NVP4-3	17		ND (<1.0)		ND (<1.0)	25259158	70	4103777	13		ND (<1.0)	2651177	9.0
NVP3-1	8		ND (<1.0)		ND (<1.0)	8409960	23	9304183	30		ND (<1.0)	1134506	3.8
NVP3-2	12		ND (<1.0)		ND (<1.0)	5265544	15	6425563	21		ND (<1.0)	1009818	3.4
NVP3-3	18		ND (<1.0)		ND (<1.0)	3024309	8.3	1356598	4.3		ND (<1.0)	473657	1.6
NVP3-4	25.5		ND (<1.0)		ND (<1.0)	1843893	5.1	12099806	39		ND (<1.0)	2178333	7.4
NVP3-5	34.5		ND (<1.0)		ND (<1.0)	795321	2.2	6841456	22		ND (<1.0)	4067837	14

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: May 13,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	Trichlorofluoromethane		Vinyl Chloride		Benzene		Ethylbenzene		Toluene		Total Xylenes	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-4	25.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-6	41		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-2	11		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-3	22.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-5	37		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-2	11		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-5	39		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-1	8		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-4	25.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-5	34.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

SOIL GAS INVESTIGATION

performed for:

Calmar Facility
City of Industry, CA

prepared under the direction of:

Levine-Fricke

prepared by:

Terra Tech Labs, Inc.
1290 East Deere Avenue, Suite 130
Santa Ana, CA 92705

July 5, 1993

Brian K. Kato, Engineer

Rashmi Shah, Laboratory Director

Introduction

On June 28, 1993, Terra Tech Labs was subcontracted by Levine-Fricke to collect and analyze soil gas samples from pre-installed vapor sampling points at the Calmar Facility in the City of Industry, California. Twenty-four (24) vapor samples were collected under Levine-Fricke's direction and analyzed for the twenty-two target analytes as specified by the Los Angeles Regional Water Quality Control Board (LARWQCB). The samples were analyzed via one of Terra Tech Labs' mobile laboratories using a gas chromatograph (GC) equipped with electrolytic conductivity detector (ELCD) and a photoionization detector (PID). The Chain-of-Custody Records (Appendix A) and analytical results (Appendix B) are attached for your review.

Sampling Methodology

Each sampling location consisted of five to six nested sampling terminals (1/4" outer diameter teflon tubing) corresponding to varying sampling depths. To collect a sample, the sampling terminal was connected to the vacuum pump (Dayton Model 4Z337, 3/4 HP) and the soil gas was then drawn from the ground. The gas flow was controlled by a regulated flowmeter to insure that the desired flow was achieved, and the purge time was measured. When the optimal volume (see description of purge volume test below) was purged from the ground, the sample was collected from the teflon tubing, upstream of the vacuum pump inlet, with a gas tight syringe and was immediately analyzed.

Discussion of the Purge Volume Test

The purpose of the purge volume test is to determine the effect of the drawn or purge volume on the detected analyte concentration. Since the purge volume test had been conducted on the previous two sampling dates to this site and since the conclusion from both visits was that two purge volume was optimal, two purge volumes were accordingly used on this sampling date.

Analytical Methodology

The samples were analyzed using a Hewlett Packard 5890 GC equipped with the following detectors: ELCD and PID. A 10 ml aliquot of sample was introduced into the analytical system. Compounds were separated using a 75M x 0.53mm DB624 megabore column and quantified using a multiple level calibration of standards. Prior to sample analysis, air blanks were analyzed to check for system contamination. Approximately 10 nanograms of the target compounds could be detected by the analytical system. With a 10 ml aliquot of sample, a quantitation limit of 1.0 µg/l was achieved. All quality control was performed in accordance with the approved LARWQCB analytical protocol. Refer to Appendix B for a complete set of analytical results.

Appendix A:

Chain-of-Custody Record

TERRA TECH LABS Inc.
ENVIRONMENTAL TESTING
1920 E. Deere Ave., Suite 130
Santa Ana, CA 92705
Tel 714 757 7022
Fax 714 757 7274

Chain-Of-Custody Record

Client: LEVINE-FRICKE
Date: 6/28/93
Project Name: CALMAR
Client Project #:
Project Address:
Project Contact: DON ELEY
Turn Around Requested:
- ☐ Immediate Attention
- ☐ Rush 24-48 Hours
- ☐ Rush 72-96 Hours
- ☐ Normal
- ☒ Mobile Lab

TTL Project #: 5109
Page 1 of 3
Lab Use Only
Sample Condition as Received:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Analysis Requested: RQWCB Target 22 List

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), (V) VAPOR	RQWCB Target 22 List								Number of Containers	Container/Comments
NVP4-1		6/28/93	0712		V	X								1	10 ml gas syringe
NVP4-2		6/28/93	0738		V	X								1	
NVP4-3		6/28/93	0802		V	X								1	
NVP4-4		6/28/93	0828		V	X								1	
NVP4-5		6/28/93	0849		V	X								1	
NVP4-6		6/28/93	0913		V	X								1	
NVP4-1		6/28/93	0937		V	X								1	
NVP4-2		6/28/93	0958		V	X								1	
NVP4-3		6/28/93	1026		V	X								1	
NVP2-1		6/28/93	1112		V	X								1	

❶ Relinquished by (signature)	Date	❷ Received by (signature)	Date	10	Total Number of Containers
Company	Time	Company	Time	Additional Comments	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature) + SAMPLER Brian K. Kato	Date 6/28/93		
Company	Time	Company Terra Tech Labs, Inc.	Time As above		

TERRA TECH LABS Inc.
ENVIRONMENTAL TESTING
1920 E. Deere Ave., Suite 130
Santa Ana, CA 92705
Tel 714.757.7022
Fax 714.757.7274

Chain-Of-Custody Record

Client: LEVINE·FRICKE
Date: 6/28/93
Project Name: CALMAR
Client Project #:
Project Address:
Turn Around Requested:
- ☐ Immediate Attention
- ☐ Rush 24-48 Hours
- ☐ Rush 72-96 Hours
- ☐ Normal
- ☒ Mobile Lab

Project Contact: DON ELEY

TTL Project #: 5109
Page 2 of 3
Lab Use Only
Sample Condition as Received:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Analysis Requested

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A)	(V) Vapor	RQWCB Target 22 List								Number of Containers	Container/Comments
NVP2-2		6/28/93	1116		V	X									1	10ml gas syringe
NVP2-3		6/28/93	1146		V	X									1	
NVP2-4		6/28/93	1213		V	X									1	
NVP2-5		6/28/93	1240		V	X									1	
NVP1-1		6/28/93	1317		V	X									1	
NVP1-2		6/28/93	1340		V	X									1	
NVP1-3		6/28/93	1407		V	X									1	
NVP1-4		6/28/93	1433		V	X									1	
NVP1-5		6/28/93	1500		V	X									1	
NVP3-1		6/28/93	1523		V	X									1	

❶ Relinquished by (signature): Brian Kato	Date	❷ Received by (signature)	Date	10	Total Number of Containers
Company: Terra Tech	Time	Company	Time	Additional Comments	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature) * SAMPLER: Brian Kato	Date: 6/28/93		
Company	Time	Company: Terra Tech	Time: AS ABOVE		

TERRA TECH LABS Inc.
ENVIRONMENTAL TESTING
1920 E. Deere Ave., Suite 130
Santa Ana, CA 92705
Tel 714.757.7022
Fax 714.757.7274

Chain-Of-Custody Record

Client LEVINE-FRICKE	**Date** 6/28/93
Project Name CALMAR	**Client Project #**
Project Address	**Turn Around Requested:** ☐ Immediate Attention ☐ Rush 24-48 Hours ☐ Rush 72-96 Hours ☐ Normal ☒ Mobile Lab
~~DON ELEY~~	
Project Contact DON ELEY	

TTL Project # 5109

Page 3 of 3

Lab Use Only Sample Condition as Received: Chilled ☐ yes ☐ no; Sealed ☐ yes ☐ no

Analysis Requested

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A) (V) VAPOR	RQWCB Target 22 List								Number of Containers	Container/Comments
~~NV~~ NVP3-2		6/28/93	1545		✓	X								1	10 ml gas syringe
NVP3-3		6/28/93	1609		✓	X								1	↓
NVP3-4		6/28/93	1638		✓	X								1	
NVP3 5		6/28/93	1709		✓	X								1	

❶ Relinquished by (signature)	Date	❷ Received by (signature)	Date	4	Total Number of Containers
Company	Time	Company	Time	Additional Comments	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature) ← SAMPLER Ron K. Lutz	Date 6/28/93		
Company	Time	Company Terra Tech Labs, Inc	Time AS ABOVE		

Appendix B:

Analytcal Results

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: June 28,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	# of Purge Vols.	Purge Vol. (ml)	Vacuum (In. of Hg)	Sample Time	Injection Time	Injection Vol. (µl)	Carbon Tetrachloride		Chlorobenzene		Chloroethane		Dibromochloromethane	
								Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP4-1	4	2	43	18	7:12	7:12	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12	2	130	18	7:38	7:38	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17	2	185	18	8:02	8:02	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-4	25.5	2	277	18	8:28	8:28	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36	2	391	18	8:49	8:49	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-6	41	2	445	18	9:13	9:13	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4	2	43	18	9:37	9:37	1000								
NVP4-2	12	2	130	18	9:58	9:58	1000								
NVP4-3	17	2	185	18	10:26	10:26	1000								
NVP2-1	4	2	43	18	11:12	11:12	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-2	11	2	119	18	11:16	11:16	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-3	22.5	2	244	18	11:46	11:46	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-4	31	2	337	18	12:13	12:13	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-5	37	2	402	18	12:40	12:40	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4	2	43	18	13:17	13:17	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-2	11	2	119	18	13:40	13:40	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-3	18	2	195	18	14:07	14:07	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-4	31	2	337	18	14:33	14:33	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-5	39	2	424	18	15:00	15:00	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-1	8	2	87	18	15:23	15:23	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-2	12	2	130	18	15:45	15:45	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-3	18	2	195	18	16:09	16:09	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-4	25.5	2	277	18	16:38	16:38	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-5	34.5	2	375	18	17:04	17:04	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: June 28, 1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	Dichlorodifluoromethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		1,2-Dichloroethene (c & t)		Dichloromethane	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)	733984	4.6		ND (<1.0)		ND (<1.0)
NVP4-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)	168527	5.3		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)	869199	5.5		ND (<1.0)		ND (<1.0)
NVP4-4	25.5		ND (<1.0)		ND (<1.0)		ND (<1.0)	1483100	9.3		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)	2077236	1.3		ND (<1.0)		ND (<1.0)
NVP4-6	41		ND (<1.0)		ND (<1.0)		ND (<1.0)	170604	1.1		ND (<1.0)		ND (<1.0)
NVP4-1	4												
NVP4-2	12												
NVP4-3	17												
NVP2-1	4		ND (<1.0)	346028	7.0		ND (<1.0)	3196923	20		ND (<1.0)		ND (<1.0)
NVP2-2	11		ND (<1.0)	703494	14		ND (<1.0)	4071354	26		ND (<1.0)		ND (<1.0)
NVP2-3	22.5		ND (<1.0)	916916	19		ND (<1.0)	4348895	27		ND (<1.0)		ND (<1.0)
NVP2-4	31		ND (<1.0)	332114	6.7		ND (<1.0)	4177111	26		ND (<1.0)		ND (<1.0)
NVP2-5	37		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)	451374	2.8		ND (<1.0)		ND (<1.0)
NVP1-2	11		ND (<1.0)		ND (<1.0)		ND (<1.0)	605643	3.8		ND (<1.0)		ND (<1.0)
NVP1-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)	1418139	8.9		ND (<1.0)		ND (<1.0)
NVP1-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-5	39		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-1	8		ND (<1.0)	268456	4.2		ND (<1.0)	1489291	9.4		ND (<1.0)		ND (<1.0)
NVP3-2	12		ND (<1.0)	101142	2.1		ND (<1.0)	417109	2.6		ND (<1.0)		ND (<1.0)
NVP3-3	18		ND (<1.0)	339840	6.9		ND (<1.0)	4162039	26		ND (<1.0)		ND (<1.0)
NVP3-4	25.5		ND (<1.0)	465421	9.4		ND (<1.0)	4577531	29		ND (<1.0)		ND (<1.0)
NVP3-5	34.5		ND (<1.0)		ND (<1.0)		ND (<1.0)	181285	1.1		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: June 28, 1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	1,1,2,2-Tetrachloroethane		1,1,1,2-Tetrachloroethane		Tetrachloroethene		1,1,1-Trichloroethane		1,1,2-Trichloroethane		Trichloroethene	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP4-1	4		ND (<1.0)		ND (<1.0)	OFF SCALE (SEE NOTE)		1183729	20		ND (<1.0)	1271957	20
NVP4-2	12		ND (<1.0)		ND (<1.0)	OFF SCALE (SEE NOTE)		946152	16		ND (<1.0)	1013413	16
NVP4-3	17		ND (<1.0)		ND (<1.0)	OFF SCALE (SEE NOTE)		811602	14		ND (<1.0)	897861	14
NVP4-4	25.5		ND (<1.0)		ND (<1.0)	9765600	140	756762	13		ND (<1.0)	473544	7.6
NVP4-5	36		ND (<1.0)		ND (<1.0)	1592976	24		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-6	41		ND (<1.0)		ND (<1.0)	368688	6		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4					7481756	1100						
NVP4-2	12					7345870	1100						
NVP4-3	17					13805788	2000						
NVP2-1	4		ND (<1.0)		ND (<1.0)	5036972	75	3320447	57		ND (<1.0)	965780	15
NVP2-2	11		ND (<1.0)		ND (<1.0)	1955191	33	3954885	65		ND (<1.0)	1383982	24
NVP2-3	22.5		ND (<1.0)		ND (<1.0)	1106218	16	4201701	69		ND (<1.0)	1752169	28
NVP2-4	31		ND (<1.0)		ND (<1.0)	928965	14	3647473	60		ND (<1.0)	2840585	45
NVP2-5	37		ND (<1.0)		ND (<1.0)	346751	5.1		ND (1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)	293620	4.3	125373	1.8		ND (<1.0)		ND (<1.0)
NVP1-2	11		ND (<1.0)		ND (<1.0)	380212	5.6	156228	2.3		ND (<1.0)		ND (<1.0)
NVP1-3	18		ND (<1.0)		ND (<1.0)	446273	6.6	134344	2.3		ND (<1.0)	85702	1.4
NVP1-4	31		ND (<1.0)		ND (<1.0)	110266	1.6		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-5	39		ND (<1.0)		ND (<1.0)	308766	4.6		ND (<1.0)		ND (<1.0)	186766	3.0
NVP3-1	8		ND (<1.0)		ND (<1.0)	592148	8.8	779529	13		ND (<1.0)	873981	14
NVP3-2	12		ND (<1.0)		ND (<1.0)	306906	4.5	482651	7.7		ND (<1.0)	472355	7.6
NVP3-3	18		ND (<1.0)		ND (<1.0)	1434071	21	2297112	38		ND (<1.0)	1864959	30
NVP3-4	25.5		ND (<1.0)		ND (<1.0)	1935277	29	3433578	56		ND (<1.0)	2404378	42
NVP3-5	34.5		ND (<1.0)		ND (<1.0)	198544	2.9		ND (<1.0)		ND (<1.0)	125615	2.0

Sampling and Analytical Notes:

Samples NVP4-1, NVP4-2,and NVP4-3 had PCE responses that were above the calibration range and were subsequently reanalyzed with a smaller aliquot (1.0 ml).

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: June 28, 1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	Trichlorofluoromethane		Vinyl Chloride		Benzene		Ethylbenzene		Toluene		Total Xylenes	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP4-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-3	17		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-4	25.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-5	36		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-6	41		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP4-1	4												
NVP4-2	12												
NVP4-3	17												
NVP2-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-2	11		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-3	22.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP2-5	37		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-1	4		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-2	11		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-4	31		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP1-5	39		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-1	8		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-2	12		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-3	18		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-4	25.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP3-5	34.5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Corporate Office
1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714 757.7022 ▲ Fax 714.757.7274
Arizona Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602 437 9367 ▲ Fax 602.437 9362

SOIL GAS INVESTIGATION

performed for:

Calmar Facility
City of Industry, CA

prepared under the direction of:

Levine-Fricke

prepared by:

Terra Tech Labs, Inc.
1920 East Deere Avenue, Suite 130
Santa Ana, CA 92705

August 5, 1993

RECEIVED
7
LEVINE-FRICKE

Brian K. Kato, Engineer

Rashmi Shah, Laboratory Director

Introduction

On August 4, 1993, Terra Tech Labs was subcontracted by Levine-Fricke to collect and analyze soil gas samples from pre-installed vapor sampling points at the Calmar Facility in the City of Industry, California. Ten (10) vapor samples were collected under Levine-Fricke's direction and analyzed for the twenty-two target analytes as specified by the Los Angeles Regional Water Quality Control Board (LARWQCB). The samples were analyzed via one of Terra Tech Labs' mobile laboratories using a gas chromatograph (GC) equipped with electrolytic conductivity detector (ELCD) and a photoionization detector (PID). The Chain-of-Custody Records (Appendix A) and analytical results (Appendix B) are attached for your review.

Sampling Methodology

Each sampling location consisted of four nested sampling terminals (1/4" outer diameter teflon tubing) corresponding to varying sampling depths. To collect a sample, the sampling terminal was connected to the vacuum pump (Dayton Model 4Z337, 3/4 HP) and the soil gas was then drawn from the ground. The gas flow was controlled by a regulated flowmeter to insure that the desired flow was achieved, and the purge time was measured. When the optimal volume (see description of purge volume test below) was purged from the ground, the sample was collected from the teflon tubing, upstream of the vacuum pump inlet, with a gas tight syringe and was immediately analyzed.

Discussion of the Purge Volume Test

The purpose of the purge volume test is to determine the effect of the drawn or purge volume on the detected analyte concentration. Three samples were collected and analyzed at a location (NVP6-2) after one, two and three probe volumes had been purged through the sampling system. Since the concentrations of the detected analaytes (see results) remained relatively constant for the three test trials, two probe volumes were purged through the sampling system prior to each sample collection.

Analytical Methodology

The samples were analyzed using a Hewlett Packard 5890 GC equipped with the following detectors: ELCD and PID. A 10 ml aliquot of sample was introduced into the analytical system. Compounds were separated using a 75M x 0.53mm DB624 megabore column and quantified using a multiple level calibration of standards. Prior to sample analysis, air blanks were analyzed to check for system contamination. Approximately 10 nanograms of the target compounds could be detected by the analytical system. With a 10 ml aliquot of sample, a quantification limit of 1.0 µg/l was achieved. All quality control was performed in accordance with the approved LARWQCB analytical protocol. Refer to Appendix B for a complete set of analytical results.

Appendix A:

Chain-of-Custody Record

TERRA TECH LABS Inc.
ENVIRONMENTAL TESTING
19201 Dearborn Ave., Suite 130
Santa Ana, CA 92705
Tel 714 757 7022
Fax 714 757 7274

Chain-Of-Custody Record

Client: LEVINE-FRICKE
Date: 08-04-93
Project Name: CALMAR
Client Project #:
Project Address: INDUSTRY, CALIFORNIA
Project Contact: DON ELEY

Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 72-96 Hours
- [ ] Normal
- [x] Mobile Lab

TTL Project #: 4342
Page: 01 of 01

Lab Use Only
Sample Condition as Received:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Analysis Requested: RCWCB Target 22

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A)	RCWCB Target 22								Number of Containers	Container/Comments
NVP6-2	1 PURGE VOLUME	08-04-93	0907		✓	X								1	10 ml syringe
NVP6-2	2 PURGE VOLUMES (TOTAL)	08-04-93	0932		✓	X								1	
NVP6-2	3 PURGE VOLUMES (TOTAL)	08-04-93	1016		✓	X								1	
NVPE-1		08-04-93	1040		✓	X								1	
NVP6-3		08-04-93	1105		✓	X								1	
NVPE-4		08-04-93	1130		✓	X								1	
NVPS-1		08-04-93	1157		✓	X								1	
NVPS-2		08-04-93	1219		✓	X								1	
NVPS-3		08-04-93	1243		✓	X								1	
NVPS-4		08-04-93	1313		✓	X								1	
														10	Total Number of Containers

❶ Relinquished by (signature)	Date	❷ Received by (signature)	Date	Additional Comments
Company	Time	Company	Time	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature) (SAMPLER) Brian K. Kato	Date 08-04-93	
Company	Time	Company TerraTech Labs, Inc.	Time AS ABOVE	

Appendix B:

Analytical Results

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: August 4,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	# of Purge Vols.	Purge Vol. (ml)	Vacuum (In. of Hg)	Sample Time	Injection Time	Injection Vol. (µl)	Carbon Tetrachloride		Chlorobenzene		Chloroethane		Dibromochloromethane	
								Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP6-2	10	1	54	18	9:07	9:07	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-2	10	2	109	18	9:32	9:32	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-2	10	3	163	18	10:16	10:16	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-1	5	2	54	18	10:40	10:40	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-3	20	2	217	18	11:05	11:05	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-4	28	2	304	18	11:30	11:30	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-1	5	2	54	18	11:57	11:57	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-2	10	2	109	18	12:19	12:19	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-3	20	2	217	18	12:43	12:43	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-4	28	2	304	18	13:13	13:13	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: August 4,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	Dichlorodifluoromethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		1,2-Dichloroethene (c & t)		Dichloromethane	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP6-2	10		ND (<1.0)	132189	2.0		ND (<1.0)	3876302	64	99178	1.5		ND (<1.0)
NVP6-2	10		ND (<1.0)	113830	1.8		ND (<1.0)	3774906	62	81537	1.2		ND (<1.0)
NVP6-2	10		ND (<1.0)	136756	2.1		ND (<1.0)	4408347	73	99846	1.5		ND (<1.0)
NVP6-1	5		ND (<1.0)	70101	1.1		ND (<1.0)	1195104	16		ND (<1.0)		ND (<1.0)
NVP6-3	20		ND (<1.0)	139842	2.2		ND (<1.0)	5049095	84	85193	1.3		ND (<1.0)
NVP6-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)	878547	11		ND (<1.0)		ND (<1.0)
NVP5-1	5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-3	20		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: August 4,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	1,1,2,2-Tetrachloroethane		1,1,1,2-Tetrachloroethane		Tetrachloroethene		1,1,1-Trichloroethane		1,1,2-Trichloroethane		Trichloroethene	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP6-2	10		ND (<1.0)		ND (<1.0)	1799737	25	854326	12		ND (<1.0)	2353301	36
NVP6-2	10		ND (<1.0)		ND (<1.0)	1592109	22	697169	9.9		ND (<1.0)	1855036	28
NVP6-2	10		ND (<1.0)		ND (<1.0)	2012449	27	826526	12		ND (<1.0)	2269194	35
NVP6-1	5		ND (<1.0)		ND (<1.0)	727425	9.9	7754500	110		ND (<1.0)	1240571	19
NVP6-3	20		ND (<1.0)		ND (<1.0)	1726406	24	718924	10		ND (<1.0)	2573191	39
NVP6-4	28		ND (<1.0)		ND (<1.0)	82450	1.1	84447	1.2		ND (<1.0)	292259	4.5
NVP5-1	5		ND (<1.0)		ND (<1.0)		ND (<1.0)	628977	8.9		ND (<1.0)	281364	4.3
NVP5-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)	343706	4.9		ND (<1.0)	659613	10
NVP5-3	20		ND (<1.0)		ND (<1.0)		ND (<1.0)	238151	3.4		ND (<1.0)	467200	7.1
NVP5-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)	115617	1.7

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: August 4,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	Trichlorofluoromethane		Vinyl Chloride		Benzene		Ethylbenzene		Toluene		Total Xylenes	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP6-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-1	5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-3	20		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-1	5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-3	20		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Corporate Office
1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274
Arizona Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602.437.9367 ▲ Fax 602.437.9362

SOIL GAS INVESTIGATION

performed for:

Calmar Facility
City of Industry, CA

prepared under the direction of:

Levine-Fricke

prepared by:

Terra Tech Labs, Inc.
1920 East Deere Avenue, Suite 130
Santa Ana, CA 92705

September 3, 1993

Brian K. Kato, Engineer

Rashmi Shah, Laboratory Director

RECEIVED
SEP 14 1993
LEVINE-FRICKE

Introduction

On August 31, 1993, Terra Tech Labs was subcontracted by Levine-Fricke to collect and analyze soil gas samples from pre-installed vapor sampling points at the Calmar facility in the City of Industry, California. Eight (8) vapor samples were collected under Levine-Fricke's direction and analyzed for the twenty-two target analytes as specified by the Los Angeles Regional Water Quality Control Board (LARWQCB). The samples were analyzed via one of Terra Tech Labs' mobile laboratories using a gas chromatograph (GC) equipped with electrolytic conductivity detector (ELCD) and a photoionization detector (PID). The Chain-of-Custody Records (Appendix A) and analytical results (Appendix B) are attached for your review.

Sampling Methodology

Each sampling location consisted of four nested sampling terminals (1/4" outer diameter teflon tubing) corresponding to varying sampling depths. To collect a sample, the sampling terminal was connected to the vacuum pump (Dayton Model 4Z337, 3/4 HP) and the soil gas was then drawn from the ground. The gas flow was controlled by a regulated flowmeter to insure that the desired flow was achieved, and the purge time was measured. When the optimal volume (see description of purge volume test below) was purged from the ground, the sample was collected from the teflon tubing, upstream of the vacuum pump inlet, with a gas tight syringe and was immediately analyzed.

Discussion of the Purge Volume Test

The purpose of the purge volume test is to determine the effect of the drawn or purge volume on the detected analyte concentration. On August 4, three samples were collected and analyzed at a location (NVP6-2) having quantifiable analytes. After one, two and three probe volumes had been purged through the sampling system, the concentrations of the detected analytes remained relatively constant. Thus, two probe volumes were found suitable to be purged through the sampling system prior to each sample collection.

Analytical Methodology

The samples were analyzed using a Hewlett Packard 5890 GC equipped with the following detectors: ELCD and PID. A 10 ml aliquot of sample was introduced into the analytical system. Compounds were separated using a 75M x 0.53mm DB624 megabore column and quantified using a multiple level calibration of standards. Prior to sample analysis, air blanks were analyzed to check for system contamination. Approximately 10 nanograms of the target compounds could be detected by the analytical system. With a 10 ml aliquot of sample, a quantification limit of 1.0 µg/l was achieved. All quality control was performed in accordance with the approved LARWQCB analytical protocol. Refer to Appendix B for a complete set of analytical results.

Appendix A:

Chain-of-Custody Record

TERRA TECH LABS Inc.
ENVIRONMENTAL TESTING
1920 E. Deere Ave., Suite 130
Santa Ana, CA 92705
Tel 714.757.7022
Fax 714.757.7274

Chain-Of-Custody Record

Client: LEVINE • FRICKE
Date: 08/31/93
Project Name: CALMAR
Client Project #:
Project Address: INDUSTRY, CALIFORNIA
Project Contact: DON ELEY

Turn Around Requested:
- [ ] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 72-96 Hours
- [ ] Normal
- [x] Mobile Lab

TTL Project #: 5539
Page: 01 of 01

Lab Use Only
Sample Condition as Received:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Analysis Requested

Sample ID	Sample Location	Date	Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A)	VAPOR (V)	LABWORKS TARGET 22	LABWORKS							Number of Containers	Container/Comments
NVPS-1 @ 5'		08/31/93	936		V	✓									1	10 ml glass syringe
NVPS-2 @ 10'		08/31/93	1006		V	✓									1	
NVPS-3 @ 20'		08/31/93	1039		V	✓									1	
NVPS-4 @ 28'		08/31/93	1115		V	✓									1	
NVP6-1 @ 5'		08/31/93	1143		V	✓									1	
NVP6-2 @ 10'		08/31/93	1212		V	✓									1	
NVP6-3 @ 20'		08/31/93	1254		V	✓									1	
NVP6-4 @ 28'		08/31/93	1321		V	✓									1	

❶ Relinquished by (signature)	Date	❷ Received by (signature)	Date	8	Total Number of Containers
Company	Time	Company	Time	Additional Comments	
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature) SAMPLER & ANALYST Brian K. Kato	Date 08/31/93		
Company	Time	Company Terra Tech Labs, Inc.	Time AS ABOVE		

Appendix B:

Analytical Results

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: August 31,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	# of Purge Vols.	Purge Vol. (ml)	Vacuum (In. of Hg)	Sample Time	Injection Time	Injection Vol. (µl)	Carbon Tetrachloride		Chlorobenzene		Chloroethane		Dibromochloromethane	
								Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP5-1	5	2	54	18	9:36	9:36	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-2	10	2	109	18	10:06	10:06	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-3	20	2	217	18	10:39	10:39	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-4	28	2	304	18	11:15	11:15	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-1	5	2	54	18	11:43	11:43	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-2	10	2	109	18	12:12	12:12	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-3	20	2	217	18	12:54	12:54	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-4	28	2	304	18	13:21	13:21	10000		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: August 31,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth (ft)	Dichlorodifluoromethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		1,2-Dichloroethene (c & t)		Dichloromethane	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP5-1	5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)	228957	3.0		ND (<1.0)		ND (<1.0)
NVP5-3	20		ND (<1.0)		ND (<1.0)		ND (<1.0)	173858	2.3		ND (<1.0)		ND (<1.0)
NVP5-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-1	5		ND (<1.0)		ND (<1.0)		ND (<1.0)	488544	6.5		ND (<1.0)		ND (<1.0)
NVP6-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)	7641135	100		ND (<1.0)		ND (<1.0)
NVP6-3	20		ND (<1.0)		ND (<1.0)		ND (<1.0)	10490676	140		ND (<1.0)		ND (<1.0)
NVP6-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)	7359849	98		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: August 31,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	1,1,2,2-Tetrachloroethane		1,1,1,2-Tetrachloroethane		Tetrachloroethene		1,1,1-Trichloroethane		1,1,2-Trichloroethane		Trichloroethene	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP5-1	5		ND (<1.0)		ND (<1.0)		ND (<1.0)	179079	1.2		ND (<1.0)	147743	1.5
NVP5-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)	527634	3.4		ND (<1.0)	846355	8.3
NVP5-3	20		ND (<1.0)		ND (<1.0)		ND (<1.0)	302813	2.0		ND (<1.0)	492510	4.9
NVP5-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-1	5		ND (<1.0)		ND (<1.0)	245271	2.2	747848	4.9		ND (<1.0)	401255	4.0
NVP6-2	10		ND (<1.0)		ND (<1.0)	4118883	37	1701349	11		ND (<1.0)	4884473	48
NVP6-3	20		ND (<1.0)		ND (<1.0)	4219006	38	1947879	13		ND (<1.0)	8218176	81
NVP6-4	28		ND (<1.0)		ND (<1.0)	1146049	10	518674	3.4		ND (<1.0)	4017752	40

Sampling and Analytical Notes:

Site Name and Location: Calmar, City of Industry

Sample Collected by: Brian Kato

Sampling Date: August 31,1993

Sample Analyzed by: Brian Kato

Sample ID	Depth ft	Trichlorofluoromethane		Vinyl Chloride		Benzene		Ethylbenzene		Toluene		Total Xylenes	
		Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l	Area	µg/l
NVP5-1	5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-3	20		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP5-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-1	5		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-2	10		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-3	20		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)
NVP6-4	28		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.0)

Sampling and Analytical Notes:

Soil

1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4614
		Client P.N.:	2455.07
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	3/31/93
Project Address:	333 South Turnbull Canyon Road	Date Received:	3/31/93
		Date Analyzed:	4/1/93-4/8/93
		Physical State:	Solid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	102	93	65-120	10	0-20
Toluene (EPA 8020)	M	96	90	60-122	6	0-22
Ethylbenzene (EPA 8020)	M	93	87	46-130	7	0-20
Xylenes, Total (EPA 8020)	M	94	87	45-135	8	0-19
1,1-Dichloroethane (EPA 8010)	M	107	107	76-128	0	0-17
1,1,1-Trichloroethane (EPA 8010)	M	107	106	72-119	1	0-22
Cis-1,3-Dichloropropene (EPA 8010)	M	114	109	65-126	5	0-16
Chlorobenzene (EPA 8010)	M	112	107	36-138	4	0-25

M = Matrix Spike / Matrix Spike Duplicate D = Duplicate

Reviewed

Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs, Inc. is not an indication of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

RECEIVED

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4614
		Client P.N.:	2455.07

Project Name:	Calmar	Date Sampled:	3/31/93
Project Address:	333 South Turnbull Canyon Road	Date Analyzed:	4/1/93-4/8/93
		Physical State:	Solid

Aromatic Volatile Organics, EPA 8020

Sample ID	Benzene EPA 8020 mg/kg	Toluene EPA 8020 mg/kg	Ethylbenzene EPA 8020 mg/kg	Xylenes, Total EPA 8020 mg/kg
LFSB4-10	ND	ND	ND	ND
LFSB4-15	ND	ND	ND	ND
LFSB4-31	ND	ND	ND	ND
LFSB4-31 1/2	ND	ND	ND	ND
LFSB4-35	ND	ND	ND	ND
LFSB4-40	ND	ND	ND	ND
Quantitation Limits mg/kg	0.0050	0.0050	0.0050	0.0050

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4614
		Client P.N.:	2455.07
Project Name:	Calmar	Date Sampled:	3/31/93
Project Address:	333 South Turnbull Canyon Road	Date Analyzed:	4/1/93-4/8/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	LFSB4-10	LFSB4-15	LFSB4-31	LFSB4-35	LFSB4-40	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	ND	1.0
1,1-Dichloroethene	1.2	ND	2.5	18	1.1	1.0
Methylene chloride	ND	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	1.6	1.1	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	3.3	ND	2.8	5.1	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	ND	1.0
1,2-Dichloroethane	2.2	ND	ND	ND	ND	1.0
Trichloroethene	1.1	ND	ND	29	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	1.0
Tetrachloroethene	160	13	150	210	9.1	1.0
Dibromochloromethane	ND	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	1.2	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	1.1	ND	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4614
		Client P.N.:	2455.07
Project Name:	Calmar	Date Sampled:	3/31/93
Project Address:	333 South Turnbull Canyon Road	Date Analyzed:	4/8/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	LFSB4-31 1/2	
Parameters	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Trichlorofluoromethane	ND	2.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
1,1-Dichloroethene	31	2.0
Methylene chloride	ND	10
trans-1,2-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	2.0
cis-1,2-Dichloroethene	ND	2.0
Chloroform	ND	2.0
1,1,1-Trichloroethane	3.0	2.0
Carbon tetrachloride	ND	2.0
1,2-Dichloroethane	ND	2.0
Trichloroethene	76	2.0
1,2-Dichloropropane	ND	2.0
Bromodichloromethane	ND	2.0
cis-1,3-Dichloropropene	ND	2.0
trans-1,3-Dichloropropene	ND	2.0
1,1,2-Trichloroethane	ND	2.0
Tetrachloroethene	61	2.0
Dibromochloromethane	ND	2.0
Chlorobenzene	ND	2.0
Bromoform	ND	2.0
1,1,2,2-Tetrachloroethane	ND	2.0
1,3-Dichlorobenzene	ND	2.0
1,4-Dichlorobenzene	ND	2.0
1,2-Dichlorobenzene	ND	2.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

4614

Project No.: ~~CALMAR~~ 2455.07	Field Logbook No.:	Date: 3-31-93	Serial No.: Nº N- 2756
Project Name: CALMAR	Project Location: 333 S Turnbull Canyon Rd.		
Sampler (Signature): Donald J Eley			Samplers: Don Eley

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010/8020				HOLD	RUSH	REMARKS
LFSB4-5	3-31-93	12:42	IC04585	One	Soil			X				X		
LFSB4-10		12:51	IC04586					X				X		*added 4/6/93
LFSB4-15		1:10	IC04587					X				X		*Archive
LFSB4-20		1:28	IC04588					X				X		
LFSB4-26		1:55	IC04589					X				X		Hold
LFSB4-31		2:25	IC04590					X						Sample clay @ the sand/clay interface RWQCB
LFSB4-31½		2:25	IC04591					X				X		*added 4/7/93
LFSB4-35		3:05	IC04592					X						
LFSB4-40		3:43	IC04593					X						
														Normal 1-week turnaround. Results to Don Eley 455-1390
														RWQCB

RELINQUISHED BY: (Signature) Donald J Eley	DATE 3-31-93	TIME 18:40	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) * Spaeding	DATE 3/31/93	TIME 1840
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:

LEVINE-FRICKE
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:

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

1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4624
		Client P.N.:	2455
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	4/1/93
Project Address:	333 South Turnbull Canyon Road	Date Received:	4/1/93
		Date Analyzed:	4/7/93-4/8/93
		Physical State:	Solid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	90	94	65-120	4	0-20
Toluene (EPA 8020)	M	89	93	60-122	4	0-22
Ethylbenzene (EPA 8020)	M	89	93	46-130	4	0-20
Xylenes, Total (EPA 8020)	M	79	82	45-135	4	0-19
1,1-Dichloroethane (EPA 8010)	M	88	91	76-128	4	0-17
1,1,1-Trichloroethane (EPA 8010)	M	90	91	72-119	2	0-22
Cis-1,3-Dichloropropene (EPA 8010)	M	80	83	65-126	4	0-16
Chlorobenzene (EPA 8010)	M	67	72	36-138	7	0-25

M = Matrix Spike / Matrix Spike Duplicate

D = Duplicate

Reviewed

Approved

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The Laboratory Results are only a portion of the Laboratory Report

RECEIVED
7
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4624
		Client P.N.:	2455

Project Name:	Calmar	Date Sampled:	4/1/93
Project Address:	333 South Turnbull Canyon Road	Date Analyzed:	4/7/93-4/8/93
		Physical State:	Solid

Aromatic Volatile Organics, EPA 8020

Sample ID	Benzene EPA 8020 mg/kg	Toluene EPA 8020 mg/kg	Ethylbenzene EPA 8020 mg/kg	Xylenes, Total EPA 8020 mg/kg
LFSB3-5	ND	ND	ND	ND
LFSB3-25	ND	ND	ND	ND
LFSB3-30	ND	ND	ND	ND
LFSB3-35	ND	ND	ND	ND
Quantitation Limits mg/kg	0.0050	0.0050	0.0050	0.0050

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4624
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	4/1/93
Project Address:	333 South Turnbull Canyon Road	Date Analyzed:	4/7/93-4/8/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	LFSB3-5	LFSB3-25	LFSB3-30	LFSB3-35	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	ND	11	3.5	2.6	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	3.7	1.3	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	2.4	17	6.4	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	ND	21	ND	7.0	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	1.4	8.0	1.7	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

4624

Project No.: 2455

Field Logbook No.:

Date: 4-1-93

Serial No.: Nº N- 2755

Project Name: CALMAR

Project Location: 333 S Turnbull Canyon Rd.

Sampler (Signature): Donald Eley

Samplers: Don Eley

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	9010/8020				HOLD	RUSH	REMARKS
LFSB3-5	4-1-93	11:43	TC20069	One	Soil			X						
LFSB3-10		11:49	TC20070									X		Normal one week turnaround
LFSB3-15		12:07	TC20071									X		
LFSB3-20		12:19	TC20072									X		Results to Don Eley
LFSB3-25		12:32	TC20073					X						
LFSB3-30		12:44	TC20074					X						955-1390
LFSB3-35		12:58	TC20075					X						

RELINQUISHED BY: (Signature) Donald Eley	DATE 4-1-93	TIME 17:17	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Kim Spalding	DATE 4/1/93	TIME 1717
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:

LEVINE-FRICKE
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: Terra Tech

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

FORM NO. 86/COC/ARF

1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4633
		Client P.N.:	2455.08
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	4/2/93
Project Address:	333 South Turnbull Canyon Road	Date Received:	4/2/93
		Date Analyzed:	4/8/93
		Physical State:	Solid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	102	103	65-120	1	0-20
Toluene (EPA 8020)	M	101	102	60-122	1	0-22
Ethylbenzene (EPA 8020)	M	100	101	46-130	1	0-20
Xylenes, Total (EPA 8020)	M	90	93	45-135	3	0-19
1,1-Dichloroethane (EPA 8010)	M	93	86	76-128	8	0-17
1,1,1-Trichloroethane (EPA 8010)	M	97	91	72-119	7	0-22
Cis-1,3-Dichloropropene (EPA 8010)	M	82	74	65-126	10	0-16
Chlorobenzene (EPA 8010)	M	85	73	36-138	16	0-25

M = Matrix Spike / Matrix Spike Duplicate

D = Duplicate

Reviewed

Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs, Inc. is not an indication of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
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RECEIVED
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4633
		Client P.N.:	2455.08

Project Name:	Calmar	Date Sampled:	4/2/93
Project Address:	333 South Turnbull Canyon Road	Date Analyzed:	4/8/93
		Physical State:	Solid

Aromatic Volatile Organics, EPA 8020

Sample ID	Benzene EPA 8020 mg/kg	Toluene EPA 8020 mg/kg	Ethylbenzene EPA 8020 mg/kg	Xylenes, Total EPA 8020 mg/kg
MW4-5	ND	ND	ND	ND
MW4-15	ND	ND	ND	ND
MW4-20	ND	ND	ND	ND
MW4-25	ND	ND	ND	ND
Quantitation Limits mg/kg	0.0050	0.0050	0.0050	0.0050

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	4/14/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4633
		Client P.N.:	2455.08

Project Name:	Calmar	Date Sampled:	4/2/93
Project Address:	333 South Turnbull Canyon Road	Date Analyzed:	4/8/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW4-5	MW4-15	MW4-20	MW4-25	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	ND	ND	ND	ND	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	ND	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	ND	ND	ND	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	ND	ND	ND	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND; Not Detectable
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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

4633

Project No.: 2455.08

Field Logbook No.:

Date: 4-2-93

Serial No.: Nº N- 1451

Project Name: CALMAR

Project Location: 333 Turnbull Cayon Rd

Sampler (Signature): Donald Eley

Samplers: Don Eley

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010/8020				HOLD	RUSH	REMARKS
MW4-5	4-2-93	7:41	IC20165	One	Soil			X						
MW4-10		7:49	IC20166									X		
MW4-15		7:53	IC20167					X						Normal
MW4-20		8:07	IC20168					X						one-week lab
MW4-20		8:25	IC20169									X		turnaround
MW4-25		8:11	IC20170					X						results to
MW4-35		8:30	IC20171									X		Don Eley
														955-1390

RELINQUISHED BY: (Signature) Donald Eley	DATE 4-2-93	TIME 3:32	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) K Spalding	DATE 4/2/93	TIME 3:32
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 7
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: Terra tech

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

1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714 757 7022 ▲ Fax 714 757 7274

LABORATORY REPORT

Client:	Levine Fricke	Report Date:	4/19/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4636
		Client P.N.:	2455
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	4/3/93
Project Address:	333 Turnbull Canyon Road	Date Received:	4/3/93
		Date Analyzed:	4/8/93-4/15/93
		Physical State:	Solid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	85	84	65-120	0	0-20
Toluene (EPA 8020)	M	82	81	60-122	1	0-22
Ethylbenzene (EPA 8020)	M	79	79	46-130	1	0-20
Xylenes, Total (EPA 8020)	M	78	78	45-135	0	0-19
1,1-Dichloroethane (EPA 8010)	M	102	100	76-128	2	0-17
1,1,1-Trichloroethane (EPA 8010)	M	108	107	72-119	0	0-22
Cis-1,3-Dichloropropene (EPA 8010)	M	85	84	65-126	1	0-16
Chlorobenzene (EPA 8010)	M	88	88	36-138	0	0-25
Benzene (EPA 8020)	M	102	103	65-120	1	0-20
Toluene (EPA 8020)	M	101	102	60-122	1	0-22
Ethylbenzene (EPA 8020)	M	100	101	46-130	1	0-20
Xylenes, Total (EPA 8020)	M	90	93	45-135	3	0-19
1,1-Dichloroethane (EPA 8010)	M	93	86	76-128	8	0-17
1,1,1-Trichloroethane (EPA 8010)	M	97	91	72-119	7	0-22
Cis-1,3-Dichloropropene (EPA 8010)	M	82	74	65-126	10	0-16
Chlorobenzene (EPA 8010)	M	85	73	36-138	16	0-25

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

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LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/19/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4636
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	4/3/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/8/93-4/9/93
		Physical State:	Solid

Aromatic Volatile Organics, EPA 8020

Sample ID	Benzene EPA 8020 mg/kg	Toluene EPA 8020 mg/kg	Ethylbenzene EPA 8020 mg/kg	Xylenes, Total EPA 8020 mg/kg
LFSB1-5	ND	ND	ND	ND
LFSB1-10	ND	ND	ND	ND
LFSB1-20	ND	ND	ND	ND
LFSB1-30	ND	ND	ND	ND
LFSB1-30 1/2	ND	ND	ND	ND
LFSB1-40	ND	ND	ND	ND
LFSB2-5.5	ND	ND	ND	ND
LFSB2-10.0	ND	ND	ND	ND
LFSB2-22.5	ND	ND	ND	ND
LFSB2-35.5	ND	ND	ND	ND
Quantitation Limits mg/kg	0.0050	0.0050	0.0050	0.0050

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/19/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4636
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	4/3/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/8/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	LFSB1-5	LFSB1-10	LFSB1-20	LFSB1-30	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	ND	ND	ND	ND	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	4.2	ND	ND	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	ND	ND	ND	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	ND	ND	ND	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/19/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4636
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	4/3/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/8/93-4/9/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	LFSB1-30 1/2	LFSB1-40	LFSB2-5.5	LFSB2-10.0	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	ND	ND	ND	ND	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	10	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	ND	ND	6.2	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	ND	ND	5.8	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/19/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4636
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	4/3/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/9/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	LFSB2-22.5	
Parameters	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	3.7	1.0
Methylene chloride	ND	10
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	12	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	3.6	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	1.5	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/19/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4636
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	4/3/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/15/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	LFSB2-35.5	
Parameters	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	2.0
Vinyl chloride	ND	2.0
Trichlorofluoromethane	ND	2.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
1,1-Dichloroethene	ND	2.0
Methylene chloride	ND	10
trans-1,2-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	2.0
cis-1,2-Dichloroethene	ND	2.0
Chloroform	ND	2.0
1,1,1-Trichloroethane	ND	2.0
Carbon tetrachloride	ND	2.0
1,2-Dichloroethane	ND	2.0
Trichloroethene	53	2.0
1,2-Dichloropropane	ND	2.0
Bromodichloromethane	ND	2.0
cis-1,3-Dichloropropene	ND	2.0
trans-1,3-Dichloropropene	ND	2.0
1,1,2-Trichloroethane	ND	2.0
Tetrachloroethene	ND	2.0
Dibromochloromethane	ND	2.0
Chlorobenzene	ND	2.0
Bromoform	ND	2.0
1,1,2,2-Tetrachloroethane	ND	2.0
1,3-Dichlorobenzene	ND	2.0
1,4-Dichlorobenzene	ND	2.0
1,2-Dichlorobenzene	ND	2.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

46316

Project No.: 2455	Field Logbook No.:	Date: 4-3-93	Serial No.: № N- 2757
Project Name: CALMAK	Project Location: 333 Turnbull Canyon Rd		
Sampler (Signature): [signature]			Samplers: Don Eley + IKG

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	601/8020				HOLD	RUSH	REMARKS
LFSB2-5.5	4-3-93	9:23	IC20199	one	Soil			X						
LFSB2-10.0		9:40	IC20200					X						
LFSB2-15.0		9:52	IC20201									X		
LFSB2-15½		9:52	IC20202									X		
LFSB2-20		10:05	IC20203									X		
LFSB2-20½		10:05	IC20204									X		
LFSB2-22.5		10:24	IC20205					X						
LFSB2-25.5		10:31	IC20206									X		
LFSB2-26.0		10:35	IC20207									X		
LFSB2-31		11:00	IC20208									X		
LFSB2-35.5		11:23	IC20209					X						
LFSB2-36		11:23	IC20210									X		
LFSB2-40.5		11:41	IC20211									X		
LFSB2-41		11:47	IC20212									X		

One week lab turn around
Results to Don Eley

RELINQUISHED BY: (Signature) [signature]	DATE 4-3-93	TIME 6-45	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Thomas P. Dwil	DATE 4/3/93	TIME 6:45 pm
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: Terra Tech

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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

4636

Project No.: 2455	Field Logbook No.:	Date: 4-3-93	Serial No.: Nº N- 1452
Project Name: CALMAR	Project Location: 333 Turnbull Cayon Rd		
Sampler (Signature): Donald Eley			Samplers: Don Eley

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010/8020				HOLD	RUSH	REMARKS
LFSB1-5	4-3-93	9:15	1C20186	one	Soil			X						
LFSB1-10		9:25	1C20187					X						
LFSB1-12½		9:34	1C20188									X		
LFSB1-15		9:42	1C20189									X		
LFSB1-15½		9:42	1C20190									X		
LFSB1-20		10:20	1C20191					X						Sample the clay for analysis
LFSB1-25		10:00	1C20192									X		
LFSB1-21½		10:43	1C20193									X		
LFSB1-28		10:43	1C20194									X		
LFSB1-30		11:16	1C20195					X						
LFSB1-30½		11:16	1C20196					(X)				~~X~~		*added 4/7/93
LFSB1-35		11:46	1C20197									X		
LFSB1-40		12:50	1C20198					X						

One week lab turnaround Results to Don Eley

RELINQUISHED BY: (Signature) Donald Eley	DATE 4-3-93	TIME 6:44	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Thomas P. Dial	DATE 4/3/93	TIME 6:44pm
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRI...
1320 Main St, Ste. 7...
Irvine CA 92714

LEVINE-FRICKE
~~4849 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: Terra Tech

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

1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714.757.7022 ▲ Fax 714.757.7274

LABORATORY REPORT

Client:	Levine Fricke	Report Date:	4/20/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4638
		Client P.N.:	2455
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	4/5/93
Project Address:	333 Turnbull Canyon Road	Date Received:	4/5/93
		Date Analyzed:	4/16/93
		Physical State:	Solid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	99	96	65-120	4	0-20
Toluene (EPA 8020)	M	98	94	60-122	4	0-22
Ethylbenzene (EPA 8020)	M	98	95	46-130	3	0-20
Xylenes, Total (EPA 8020)	M	97	93	45-135	4	0-19
1,1-Dichloroethane (EPA 8010)	M	99	99	76-128	1	0-17
1,1,1-Trichloroethane (EPA 8010)	M	96	96	72-119	0	0-22
Cis-1,3-Dichloropropene (EPA 8010)	M	107	109	65-126	2	0-16
Chlorobenzene (EPA 8010)	M	101	100	36-138	1	0-25

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Reviewed

Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs, Inc. is not an indication of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/20/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4638
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	4/5/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/16/93
		Physical State:	Solid

Aromatic Volatile Organics, EPA 8020

Sample ID	Benzene EPA 8020 mg/kg	Toluene EPA 8020 mg/kg	Ethylbenzene EPA 8020 mg/kg	Xylenes, Total EPA 8020 mg/kg
MW5-5	ND	ND	ND	ND
MW5-15	ND	ND	ND	ND
MW5-25	ND	ND	ND	ND
MW5-30	ND	ND	ND	ND
Quantitation Limits mg/kg	0.0050	0.0050	0.0050	0.0050

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine Fricke	Report Date:	4/20/93
Client Address:	1920 East Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	4638
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	4/5/93
Project Address:	333 Turnbull Canyon Road	Date Analyzed:	4/16/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 601

Sample ID	MW5-5	MW5-15	MW5-25	MW5-30	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	ND	1.0
1,1-Dichloroethene	ND	ND	ND	ND	1.0
Methylene chloride	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	1.0
Chloroform	ND	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	2.4	ND	1.0
Carbon tetrachloride	ND	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	ND	1.0
Trichloroethene	ND	ND	ND	ND	1.0
1,2-Dichloropropane	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	1.0
Tetrachloroethene	ND	ND	ND	ND	1.0
Dibromochloromethane	ND	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	ND	1.0
Bromoform	ND	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

4638

Project No.: 2455

Field Logbook No.:

Date: 4-5-93

Serial No.: Nº N- 2758

Project Name: Calizar

Project Location: 333 Turnbull Canyon Rd

Sampler (Signature): Donald Eley

Samplers: Don Eley

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8010/8020				HOLD	RUSH	REMARKS
MW5-5	4-5-93	8:08	IC20378	One	Soil			X						
MW5-10		8:13	IC20379					X				X		
MW5-15		8:20	IC20380					X						
MW5-20		8:31	IC20381									X		
MW5-25		8:37	IC20382					X						
MW5-30		8:50	IC20383					X						
MW5-35		9:02	IC20384									X		Saturated w/groundwater

Normal 1-week laboratory turnaround, results to Don Eley

RELINQUISHED BY: (Signature) Donald Eley	DATE 4-5-93	TIME 14:50	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Kim Spalding	DATE 4/5/93	TIME 1450
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:

LEVINE-FRICKE
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: Terra Tech

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

FORM NO. 86/COC/ARF

Corporate Office
1920 E. Deere Ave., Suite 130 ▲ Santa Ana, California 92705
Tel 714 757 7022 ▲ Fax 714 757 7274
Arizona Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602.437 9367 ▲ Fax 602.437 9362

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	7/28/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	5230
		Client P.N.:	2455
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	7/19/93
Project Address:	245 S. Turnbull Canyon Rd. City of Industry, CA	Date Received:	7/19/93
		Date Analyzed:	7/20/93-7/23/93
		Physical State:	Solid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	98	96	64-121	2	0-21
Toluene (EPA 8020)	M	94	95	75-116	1	0-15
Ethylbenzene (EPA 8020)	M	97	99	69-117	2	0-21
Xylenes, Total (EPA 8020)	M	97	99	74-116	2	0-20
1,1-Dichloroethane (EPA 8010)	M	95	89	37-121	6	0-21
1,1,1-Trichloroethane (EPA 8010)	M	104	96	49-115	8	0-23
Cis-1,3-Dichloropropene (EPA 8010)	M	87	92	73-144	5	0-20
Chlorobenzene (EPA 8010)	M	80	92	64-141	12	0-33

M = Matrix Spike / Matrix Spike Duplicate

.. = Laboratory Control Sample Spike / Spike Duplicate

Don Bailey
Reviewed

Joanna Ballesteros
Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
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Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

RECEIVED
3
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	7/28/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	5230
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	7/19/93
Project Address:	245 S. Turnbull Canyon Rd. City of Industry, CA	Date Analyzed:	7/20/93-7/23/93
		Physical State:	Solid

Sample ID	Benzene EPA 8020 mg/kg	Toluene EPA 8020 mg/kg	Ethylbenzene EPA 8020 mg/kg	Xylenes, Total EPA 8020 mg/kg
MW6-5	ND	ND	ND	ND
MW6-10	ND	ND	ND	ND
MW6-20	ND	ND	ND	ND
MW6-30	ND	ND	ND	ND
MW6-30Comp	ND	ND	ND	ND
MW6-35	ND	ND	ND	ND
Quantitation Limits mg/kg	0.0050	0.0050	0.0050	0.0050

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	7/28/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	5230
		Client P.N.:	2455

Project Name:	Calmar	Date Sampled:	7/19/93
Project Address:	245 S. Turnbull Canyon Rd. City of Industry, CA	Date Analyzed:	7/20/93-7/23/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW6-5	MW6-10	MW6-20	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	1.0
1,1-Dichloroethene	ND	ND	ND	1.0
Methylene chloride	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	1.0
Chloroform	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	4.2	1.0
Carbon tetrachloride	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	1.0
Trichloroethene	ND	1.9	5.9	1.0
1,2-Dichloropropane	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	1.0
Tetrachloroethene	ND	ND	ND	1.0
Dibromochloromethane	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	1.0
Bromoform	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	7/28/93
Client Address:	1920 Main Street, Suite 750 Irvine, CA 92714	Lab P.N.:	5230
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	7/19/93
Project Address:	245 S. Tumbull Canyon Rd. City of Industry, CA	Date Analyzed:	7/20/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW6-30	MW6-30COMP	MW6-35	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	1.0
1,1-Dichloroethene	1.7	ND	ND	1.0
Methylene chloride	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	1.0
cis-1,2-Dichloroethene	1.7	1.0	1.9	1.0
Chloroform	ND	ND	ND	1.0
1,1,1-Trichloroethane	1.0	ND	ND	1.0
Carbon tetrachloride	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	1.0
Trichloroethene	280	350	260	30
1,2-Dichloropropane	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	1.0
Tetrachloroethene	ND	ND	ND	1.0
Dibromochloromethane	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	1.0
Bromoform	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

5230

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2455
Field Logbook No.:
Date: 7/19/93
Serial No.: № N- 2912
Project Name: Calmar
Project Location: City of Industry 245 S Turnbull Canyon Rd
Sampler (Signature): Donald Eley
Samplers: Don Eley

SAMPLES						ANALYSES							
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240	8260			HOLD	RUSH
MW6-5	7/14/93	10:44	1C30934	one	Soil			X	X				
MW6-10		10:48	1C30935									X	
MW6-15		10:58	1C30936									X	
MW6-20		11:02	1C30937					X	X				
MW6-25		11:24	1C30938									X	
MW6-30		11:31	1C30939					X	X				
MW6-30comp		11:31	1C30940					X	X				
MW6-35		11:39	1C30941					X	X				
MW6-40		12:00	1C30942									X	

REMARKS

Results to Don Eley (FAX 955-0683)
"Normal" One-week Turnaround.
These samples are part of the W.I.P. program

Cooler Temp: 14.0°C upon Receipt

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
Donald Eley	7/19/93	18:17	Jeff Freeman	7/19/93	1817
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
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: Terra Tech Labs of Santa Ana

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

FORM NO. 86/COC/ARF

TERRA TECH LABS

Corporate Office
1920 E. Deere Ave. Suite 130 ▲ Santa Ana, California 92705
Tel 714 757 7022 ▲ Fax 714 757 7274

Phoenix Office
3902 E. University Drive, Suite 4 ▲ Phoenix, Arizona 85034
Tel 602 437 9367 ▲ Fax 602 437 9362

LABORATORY REPORT

Client:	Levine-Fricke	Report Date:	8/3/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5239
		Client P.N.:	2455
Contact:	Don Eley		
Project Name:	Calmar	Date Sampled:	7/20/93
Project Address:	333 S. Turnbull	Date Received:	7/20/93
		Date Analyzed:	7/23/93
		Physical State:	Solid

Quality Assurance/Quality Control Summary

Parameter (Method)	QC Type	MS Percent Recovery	MSD Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
Benzene (EPA 8020)	M	98	96	65-120	2	0-20
Toluene (EPA 8020)	M	94	95	60-122	1	0-22
Ethylbenzene (EPA 8020)	M	97	99	46-130	2	0-20
Xylenes, Total (EPA 8020)	M	97	99	45-135	2	0-19
1,1-Dichloroethane (EPA 8010)	M	95	89	76-128	6	0-17
1,1,1-Trichloroethane (EPA 8010)	M	104	96	72-119	8	0-22
Cis-1,3-Dichloropropene (EPA 8010)	M	87	92	65-126	6	0-16
Chlorobenzene (EPA 8010)	M	80	92	36-138	14	0-25

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample Spike / Spike Duplicate

Don Bailey
Reviewed

Socorro Balbonado
Approved

The samples were received by TERRA TECH LABS, Inc. in a chilled state, intact and accompanied by the Chain-of-Custody Record.
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The Laboratory Results are only a portion of the Laboratory Report.

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-9
LEVINE-FRICKE

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/3/93
Client Address:	1920 Main Street, Suite750	Lab P.N.:	5239
	Irvine, CA 92714	Client P.N.:	2455

Project Name:	Calmar	Date Sampled:	7/20/93
Project Address:	333 S. Turnbull	Date Analyzed:	7/23/93
		Physical State:	Solid

Sample ID	Benzene EPA 8020 mg/kg	Toluene EPA 8020 mg/kg	Ethylbenzene EPA 8020 mg/kg	Xylenes, Total EPA 8020 mg/kg
MW7-5	ND	ND	ND	ND
MW7-10	ND	ND	ND	ND
MW7-20	ND	ND	ND	ND
MW7-25	ND	ND	ND	ND
MW7-30	ND	ND	ND	ND
MW7-35	ND	ND	ND	ND
Quantitation Limits mg/kg	0.0050	0.0050	0.0050	0.0050

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/3/93
Client Address:	1920 Main Street, Suite750	Lab P.N.:	5239
	Irvine, CA 92714	Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	7/20/93
Project Address:	333 S. Turnbull	Date Analyzed:	7/23/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW7-5	MW7-10	MW7-20	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	ND	1.0
Vinyl chloride	ND	ND	ND	1.0
Trichlorofluoromethane	ND	ND	ND	1.0
Bromomethane	ND	ND	ND	1.0
Chloroethane	ND	ND	ND	1.0
1,1-Dichloroethene	ND	ND	28	1.0
Methylene chloride	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	1.0
1,1-Dichloroethane	ND	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	1.2	1.0
Chloroform	ND	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	ND	1.0
Carbon tetrachloride	ND	ND	ND	1.0
1,2-Dichloroethane	ND	ND	ND	1.0
Trichloroethene	7.1	6.6	54	1.0
1,2-Dichloropropane	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	1.0
Tetrachloroethene	4.6	5.2	29	1.0
Dibromochloromethane	ND	ND	ND	1.0
Chlorobenzene	ND	ND	ND	1.0
Bromoform	ND	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	ND	1.0

ND: Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/3/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5239
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	7/20/93
Project Address:	333 S. Turnbull	Date Analyzed:	7/23/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW7-25	MW7-35	
Parameters	Conc. (µg/kg)	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	ND	1.0
Vinyl chloride	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
1,1-Dichloroethene	ND	ND	1.0
Methylene chloride	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	ND	ND	1.0
cis-1,2-Dichloroethene	ND	ND	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	1.0
Carbon tetrachloride	ND	ND	1.0
1,2-Dichloroethane	ND	ND	1.0
Trichloroethene	3.3	ND	1.0
1,2-Dichloropropane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene	ND	ND	1.0
Dibromochloromethane	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
Bromoform	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client:	Levine-Fricke	Report Date:	8/3/93
Client Address:	1920 Main Street, Suite750 Irvine, CA 92714	Lab P.N.:	5239
		Client P.N.:	2455
Project Name:	Calmar	Date Sampled:	7/20/93
Project Address:	333 S. Turnbull	Date Analyzed:	7/23/93
		Physical State:	Solid

Halogenated Volatile Organics, EPA 8010

Sample ID	MW7-30	
Parameters	Conc. (µg/kg)	Quantitation Limits (µg/kg)
Chloromethane	ND	1.0
Vinyl chloride	ND	1.0
Trichlorofluoromethane	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	91	1.0
Methylene chloride	ND	5.0
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	2.2	1.0
cis-1,2-Dichloroethene	3.4	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	96	30
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	ND	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

5239

Project No.: 2455	Field Logbook No.:	Date: 7/20/93	Serial No.: Nº N- 2913
Project Name: Calmat	Project Location: 333 S. Turnbull Canyon Rd (adjacent)		
Sampler (Signature): Donald Eley			Samplers: Don Eley

SAMPLES						ANALYSES							
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	8020	8010			HOLD	RUSH
MW7-5	7/20/93		1C31031	One	Soil			X	X				
MW7-10			1C31032					X	X				
MW7-10 Comp			1C31033									X	
MW7-15			1C31034									X	
MW7-20			1C31035					X	X				
MW7-25			1C31036					X	X				
MW7-30			1C31037					X	X				
MW7-35			1C31038					X	X				
MW7-40			1C31039									X	

REMARKS

Results to Don Eley (FAX), normal one-week lab turnaround

Note: This is an RWQCB "WIP" Project

Cool temp 13.6 when rec'd by lab (KRS)

RELINQUISHED BY: (Signature) Donald Eley	DATE 7/20/93	TIME 17:14	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) K. Spalding	DATE 7/20/93	TIME 17:14
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:

LEVINE-FRICKE
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:

Terra Tech Labs of Santa Ana CA

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

FORM NO. 86/COC/ARF

APPENDIX D

Field Notes

LEVINE-FRICKE

Daily Field Report

Project: Calmar Project No.: 2455

Personnel Inspector: RHF/CSB Day: ~~Monday~~ Wed. Date: 7/27/94

Time On Site: From: 1:30 To: 2:30 From: _____ To: _____ Task No(s): 6

Weather: clear, hot no wind

Description of Task: gauge ground water monitoring wells

Equipment In Use: Solinist-Water Sounder Subcontractors: _____

Work Completed (attached copy of field notes): - See attached water level sheet -

Special Conditions (Visitors, Corrective Work Required, etc.): _____

Reviewed by: _____

LDR/DYFLDRPT

LEVINE•FRICKE

WATER-LEVEL MEASUREMENTS

Project Name: Calmar **Project No.:** 2455

Field Personnel: RHF / CSB **Date:** 7/27/94

General Observations: clear, hot

WELL NO.	WELL ELEVATION	WATER LEVEL MEASUREMENTS 1	WATER LEVEL MEASUREMENTS 2	DEPTH TO WATER	REMARKS (UNITS = FEET)
MW-1	~~2.77~~		30.59		
MW-2	1:56			30.21	
MW-3	2:12			29.92	
MW-4	1:30			30.56	
MW-5	1:39			29.64	1 inch standing water
MW-6	1:45			30.35	
MW-7	1:50			30.20	1 inch standing water
P-1	2:01			29.64	need to replace 4"
P-2	2:16			30.52	
P-3	1:35			30.33	
					need to replace seal on MW-7

25AUG88H20 FORM

LEVINE-FRICKE

Daily Field Report

Project: CALMAR Project No.: 2455.14

Personnel Inspector: TLT Day: — Date: 6-22, 6-23-94

Time On Site: From: _____ To: _____ From: _____ To: _____ Task No(s): 03

Weather: clear - 85°

Description of Task: WATER SAMPLING

Equipment In Use: ↓ Subcontractors: —0—

Work Completed (attached copy of field notes): See Attached field notes:

Special Conditions (Visitors, Corrective Work Required, etc.):

Reviewed by:

LDR/DYFLDRPT

6-21-94

Calwark 2455 - water sampling

6:00 TLT RHF at field office
set up to go to site.

7:45 - on site, set up decon. etc.

8:15 - begin well

MW-1	8:34	31.91
MW-2	8:23	31.25
MW-3	8:31	30.96
MW-4	8:38	31.58
MW-5	8:43	30.07
MW-6	8:47	31.38
MW-7	8:50	31.24
P-1	8:57	31.56
P-2	8:28	30.07
P-3	8:41	31.29

9:15 decon equip. begin sampling
wells

MW-5	TD- 50	DTW - 30.07	
	casing = 13		
	4 vol-s = 52 Gallons		
	9:29- start pump		
9:30			
pH	7.55		
cond	1.72	pump at 5-8 GPM	
Temp	22.0	clear	
Turb	26.7		
Gallons	15		
~~9:30~~			
9:33			
pH	7.40		
cond	1.94		
Temp	22.1	clear	
Gallons	30		
9:35			
pH	7.35		
cond	2.07		
Temp	22.1	clear	
Gallons	45		

MW-5 cont.

pH	7.25	
cond	2.05	
Temp	22.5	
Turb	4.1	
Gallons	55	STOP

MW-1	TD = 57	DTW 31.91	
	casing = 16.3		
	4 volumes = 65 Gallons		
10:04	START - 10:07		
pH	7.73		pump @ 3.5 GPM
cond	1.63		clear
Temp	22.1		
Turb	1.9		
Gallons	20		
10:14			
pH	7.02		
cond	~~2.37~~ 1.67		
Temp	23.7		clear
Gallons	40		5-8 GPM

MW-1 Cont.

10:19
pH 7.02
Cond. 1.68
Temp. 22.20
Gallons 55

10:24 - stop pump
pH 7.07
Cond 1.68 clear
Temp 22.5 stop.
Turb. 2.1
Gallons 65

MW-5 sample - 11:00
Turbidity = 12.1 NTU's (GW-5-062194)

MW-1 sample 11:15
Turbidity = 6.8 NTU's (GW-1-062194)

MW-4 TD = 50 DTW = 31.58
1 casing = 11.57 , 4 vols = 47.89

11:51 - start pump
11:56
pH 6.91 ~3.5 GPM
Cond 1.75 clear
Temp 22.7
Turb 13.33
Gallons 10

11:56
pH - 7.01
Cond - 1.73 clear - stat
Temp - 22.4 5-5 GPM
Gallons - 20

11:59
pH - 7.05
Cond - 1.72 move pump to
Temp - 20.4 top of water
Gallons - 30

MW-4 cont.

pH - 6.56
Cond - 1.78
Temp. 22.6
Gallons - ~~4~~50
Turb - 12.45

clear 1 stop

P-3 TD = 58 DTW 31.29

1 casing = 17.36, 4 vols = 69.4

pH
Cond
Temp
Turb
Gallons

pH
Cond
Temp
Gallons

Equipment Blank at 12:30
pour DI water over pump
inlet screen, collect grab sample
(EB-1-694)

P-2 TD = 56, DTW = 30.07

1 casing = 16.8, 4 casings 67.5
13:12 start
Turb - 8.51
pH - 7.18
Cond - 1.58
Temp - 23.5
Gallons - 20

clear
pump at 3-5 gpm

pH - 7.01
Cond - 1.82
Temp - 23.3
Gallons - ~~40~~ 30

clear

Return on site to see sampling procedures.

1:24 P-2 Cont

pH - 6.99
Cond - 1.83
Temp - 24.0
Gallons - 45

1:28
pH - 7.02
Cond - 1.82
Temp - 23.9
Gallons - 60
Turb - 4.80

1:30
Gallons - 70 STOP.

MW-4 sample turbidity at 24.5 ntub.
no sample collected.

Alan Hsu RWQCB - off site
inspected sampling, purging, etc.

P-3 TD = 58 31.25
17.36 1 casing, 4 vols = 69

2:08
pH - 7.24
Cond - 2.01 START AT 2:06
Temp - 25.7 clear - sl. murky
Turb - 61.2 pump at 3 GPM
Gallons 10 Dry

pump stopped resume at 2:25
pH - 7.24
Cond - 2.04 clear
Temp - 24.4
~~Turb~~
Gallons 20 Dry

2:42 Resume 2:35
pH - 7.20
Cond - 2.00 pump at 1 GPM
Temp - 26.3
Gallons - 40

2:43 stop Dry

P-3 cont

~~Temp~~ - pumped dry 3 times at
~~PH~~ - 1-3 GPM - will let recover
~~Cond~~ - prior to sampling. stop
~~Gallons~~ - at 2:43.

- sample MW-4 at 2:45
14.97 ntus (GW-4-062194)

- sample P-2 at 3:05 (GW-P2-062194)
Duplicate (P-200) (GW-P200-062194)
Turbidity = 16.5 ntus

- sample P-3 at 3 30 (GW-P3-062194)
1.62 ntus.

clean Area, prepare to leave site
off site at 3:45 to Terra Tech,
samples to Terra Tech
out at 5:00.

2455 clear 80°

6:00 leave site to calibrate
7:00 on site, check & prepare
for sampling.

MW-3 DTW-20.76 TD = 43.5'
1 casing = 8.1 4 vols = 32.

7:44 start
7:52
pH - 7.12
Cond - .80 pl muddy
Temp - 22.4 pump at 3.5 GPM
Turb -
Gallons - 6

7:55
Turb - 14.71
pH - 7.04 clear
Cond - .87
Temp - 22.4
Gallons - 12

8:00
pH - 7.07 move pump
Cond - 1.03 slightly
Temp - 22.4
Gallons - 18

MW-3 cont.

8:05

Turb - 11.4

pH - 6.99

cond - 1.30

Temp - 22.9 stop / clear

Gallons - 50

P-1 TD = 52 DTW = 31.56

1 casing = 13. , 4 vols = 53

8:19 START

8:24

pH - 6.92

cond - .60 3.5 gpm

Temp - 22.2 clear

Turb - 8.50

Gallons - 15

8:30

pH - 6.85

cond - .87 clear

Temp - 22.1

Gallons - 30

8:34

pH - 6.83

cond - 1.03

Temp - 22.2 clear

Gallons - 40

8:39

Turb - 7.60

pH - 6.82

cond - 1.06 clear / stop

Temp - 22.3

Gallons - 53

MW-6 TD = 53 DTW = 31.38

1 casing = 14.0 , 4 vols = 56

START 9:26

9:28

pH - 7.13 5.8 gpm

cond - 1.83 clear

Temp - 27.5

Turb - 6.35

Gallons - 15

9:35 MW-6 CONT

pH -	6.94		
Cond -	1.91	3 GPM	
Temp -	22.6		
Gallons -	35		
9:42			
Turb -	4.55		
pH -	6.96		
Cond -	1.91	clear / STOP	
Temp -	22.8		
Gallons -	55		

MW-7 TD = 53.5 DTW = 31.24

14 = 1 CASING , 56 gallons = 4 volumes

START = 9:54

9:57			
pH -	7.07		
Cond -	1.79		
Temp -	22.6	clear	
Turb -	16.68	pump AT 5 GPM	
Gallons -	15		

MW-7 CONT.

9:59			
pH -	7.04		
Cond -	1.81		
Temp -	22.8	clear	
Gallons -	30		
10:02			
pH -	7.07		
Cond -	1.81	clear	
Temp -	23.1		
Gallons -	45		
10:04			
Turb -	32.7		
pH -	7.09	clear / STOP	
Cond -	1.85		
Temp -	22.8		
Gallons -	55		

sample MW-3 AT 10:20 ,
(GW-3-062294) , 2.08 NTU's

sample P-1 AT 10:25 ,
(GW-P1-062294) , 1.90 NTU's

1030 Decon Equip.

MW-2 TD = 42 DTW = 31.25

1 Cas. = 10.89 , 4 vols. = 43.55

START 10:48

10:50

pH 7.41

Cond 2.27 Pump AT 3 GPM

Temp 23.3 clear

Turb 14.73

Gallons 10

10:53

pH 7.27

Cond 2.08 clear

Temp 22.9

Gallons 20

10:56

pH 7.14

Cond 2.02

Temp 22.6 clear - more pump

Gallons 30

MW-2 CONT.

10:59

pH 7.10

Cond 2.04

Temp 22.9

Gallons 45

Turb 16.20

Sample MW-6 AT 11:10,
(GW-6-062294), 8.45 NTUs
Duplicate on MW-6 (GW-600-062294)
Sample MW-7 AT 11:20
(GW-7-062294), 3.25 NTUs

Break - clean Equipt
Could Track, wait for
MW-2 to settle.

~~Sample MW-2 AT 12:08~~
~~(GW-2-062294),~~ - NTUs
MW Sample 29.0 NTUs, will
let settle for 1 H.R.

Sample MW-2 AT 1:12,
17.14 NTUs, (GW-2-062294)

1:20 off S.Z. to Terra Tech.

IN LAB 2:30
OUT AT 3:00

LEVINE-FRICKE

Daily Field Report

Project: Calmar Project No.: 2455.09

Personnel Inspector: TWJ Day: — Date: 6-21, 22-1994

Time On Site: From: _____ To: _____ From: _____ To: _____ Task No(s): _____

Weather: clear

Description of Task: water sampling

Equipment In Use: ✓ Subcontractors: —

Work Completed (attached copy of field notes): See Attached

RWQCB on site 6-22-94

Special Conditions (Visitors, Corrective Work Required, etc.): _____

Reviewed by: _____

LDR/DYFLDRPT

Calmar - Surfer grid for water level data 4-28-94

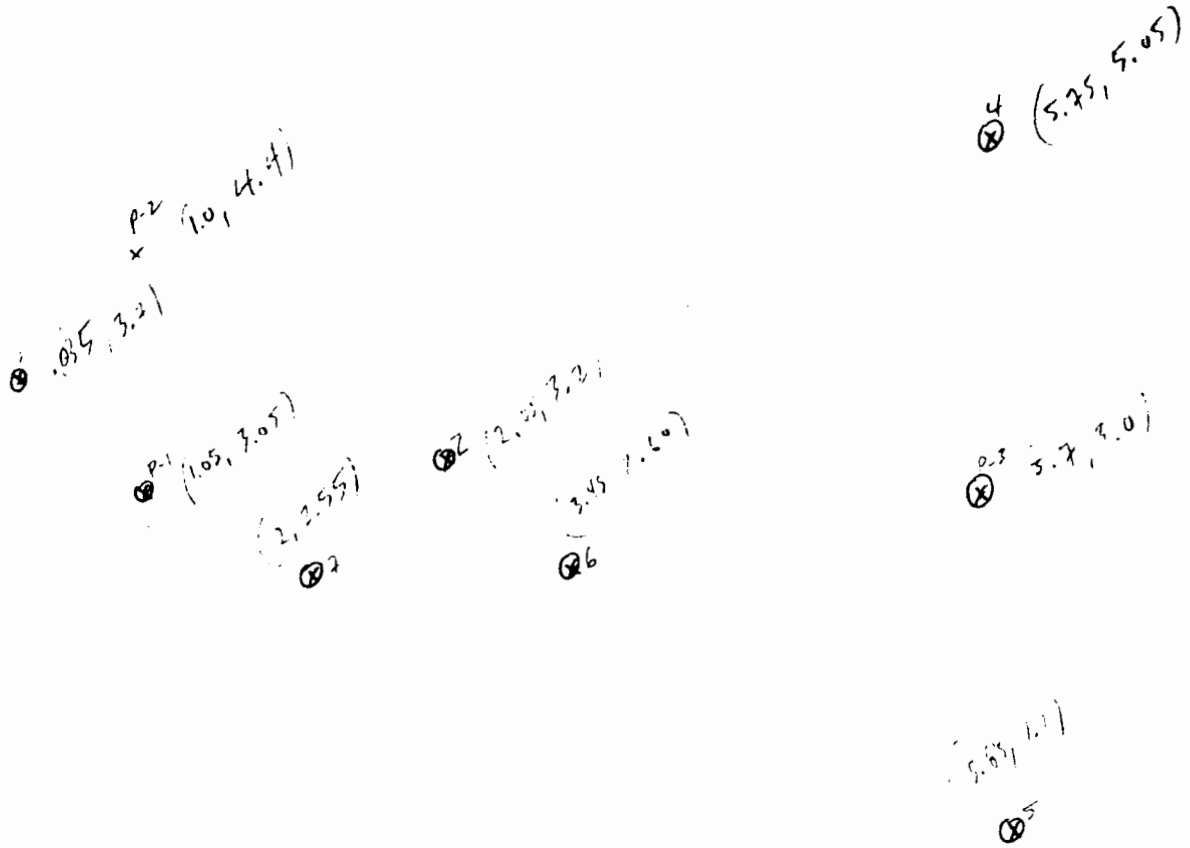
2455

- field notes

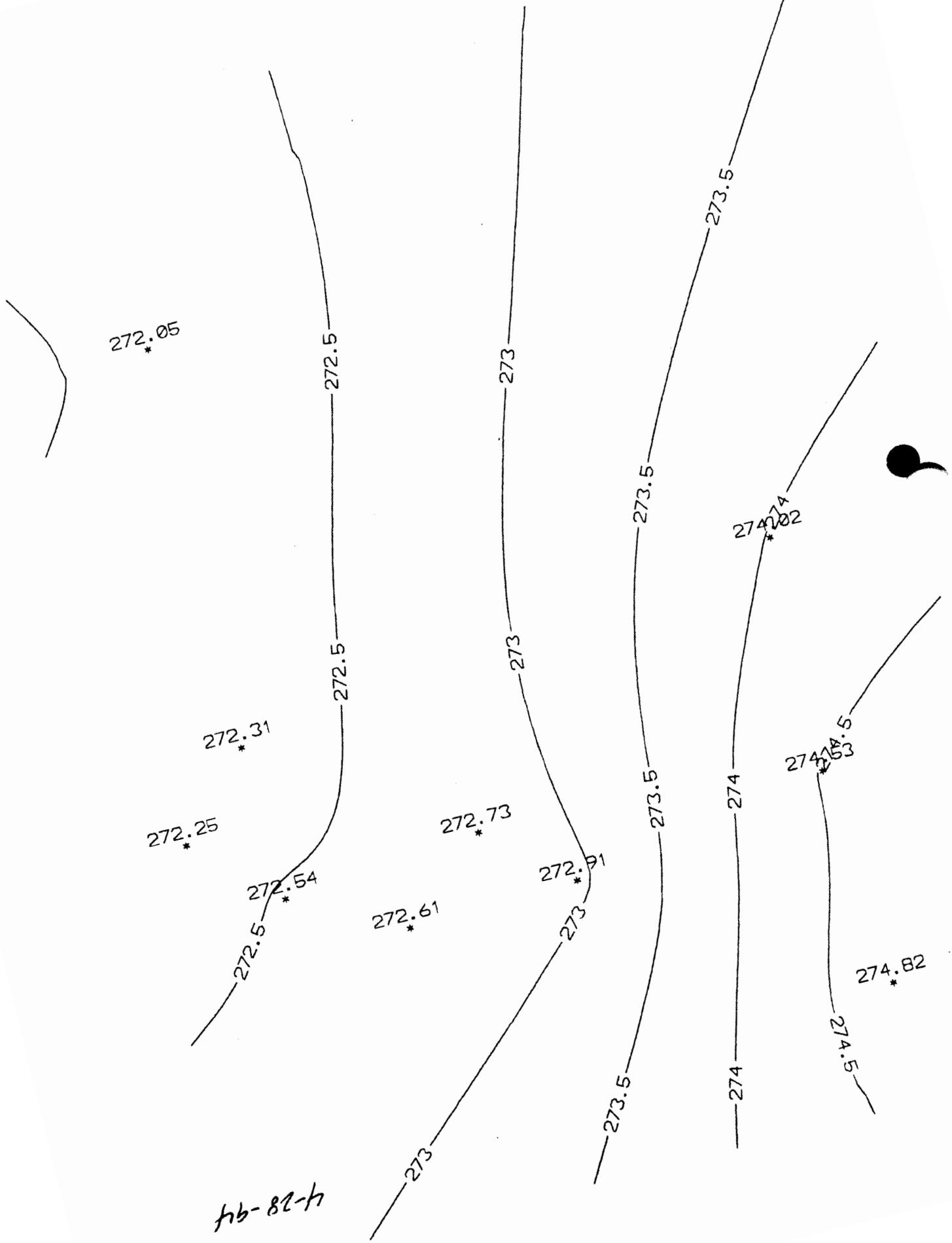
2455.DAT

2455.GRD

1	1.05	7.95
2	2.75	3.2
3	3.5	3.7
4	5.75	5.05
5	5.85	1.1
6	3.45	2.60
7	2.0	2.55
P1	1.05	3.05
2	1.0	4.04
3	5.7	3.0



22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD


272.05
272.5
273
273.5
272.31
272.25
272.54
272.73
272.61
272.91
274.02
274.53
274.82
274
274.5

4-28-94

LEVINE-FRICKE

Daily Field Report

Project: Calmar Project No.: 245509

Personnel Inspector: RHF Day: Thurs. Date: 4/28/94

Time On Site: From: 7:15 To: 9:45 From: _____ To: _____ Task No(s): _____

Weather: Clear, warm - no wind

Description of Task: water level measurements

Equipment In Use: Solinist well sounder Subcontractors: _____

Work Completed (attached copy of field notes): - See water level measurement sheet -

7:15 - Arrived met with Jim Jackson of Calmar he requested a copy of water level measurement sheet. Gauged 10 wells using a Solinist water level sounder

9:45 - Left site, Gave copy of Data to Jim Jackson

Special Conditions (Visitors, Corrective Work Required, etc.): _____

Reviewed by: _____

LDR/DYFLDRPT

Sample P-2 @ 1:10
TURBITY = 13.5
(P-2-394)

Sample MW-2 @ 1:31
TURBITY = 9.4
(MW-2-394)

Sample MW-3 @ 1:22
TURBITY = 2.5
(MW-3-394)

Sample P-1 @ 1:43
TURBITY = 9.8
(P-1-394)

LOAD UP EQUIPMENT &
FILL OUT C.O.C.
LEFT SITE @ 2:15PM
DELIVER SAMPLES TO LAB
RETURN RENTAL STEAM CLEANER
IN SAN DIEGO. Drop Samples
off @ 3:25; 3:30 @ RESOURCE
OFFICE OFF LOAD BND END @ 4:00PM

4/28/94 Thurs

RHF
7:15- Arrived on site, met with Jim Jackson, signed in at front desk. Placed new chain & lock on gate to South adjoining property. & Proceeded to gauge wells.

	DTW
MW-5	30.76
MW-4	30.48
MW-1	29.27
P-3	30.59
MW-7	30.43
MW-2	30.42
P-1	29.11
MW-3	30.11
P-2	30.78
MW-1	31.11

9:45- Left site, after giving Jim Jackson a copy of the water-level measurements

LEVINE•FRICKE

WATER-LEVEL MEASUREMENTS

7:15 - A

Project Name: Calmar **Project No.:** 2455.09

Field Personnel: RHF **Date:** 4/28/94

General Observations:

WELL NO.	WELL ELEVATION	WATER LEVEL MEASUREMENTS 1	WATER LEVEL MEASUREMENTS 2	DEPTH TO WATER	REMARKS (UNITS = FEET)
MW-4	304.78			30.76	274.02 Standing water in
P-3	305.01			30.48	274.53
MW-5	304.09			29.27	274.82
MW-6	303.50			30.59	272.91
MW-7	303.01			30.43	272.61
MW-2	303.15			30.42	272.73
P-1	301.65			29.11	272.54
MW-3	302.36			30.11	272.25
P-2	303.09			30.78	272.31
MW-1	303.16			31.11	272.05

25AUG88H20 FORM

LEVINE-FRICKE

Daily Field Report

Project: CALMAR Project No.: 2455.09

Personnel Inspector: T-T / SEL Day: Mond-Tues Date: 3-28/29-94

Time On Site: From: _____ To: _____ From: _____ To: _____ Task No(s): 03

Weather: —

Description of Task: WATER SAMPLING

Equipment In Use: _____ Subcontractors: —

Work Completed (attached copy of field notes): See Attached.

Special Conditions (Visitors, Corrective Work Required, etc.): _____

Reviewed by: _____

LDR/DYFLDRPT

TWT
SBL 3/28/94 CALWHAZ

6:30 Leave to site

- Terra Tech did not have sample bottles ready for pick-up, waiting for someone to get bottles.

- weather clear - 80° - no wind.

8:00 on site - check equip. - prepare for sampling.

water level meter was not available - using ALTAT - General DTW. Will need a Solinst water level meter for site Hydralogger

8:30 - steam cleaner not operating properly

9:00 - off-site to rent HT pressure washer. 9:45 back on site

10:30 steam equip. - one pump not working.

MW-5

TD = 50 DTW = 29.58 = 20.42

casing volume = 13.27 4 casings = 53 Galls.

~~10:44 START~~

Gallons - 10 Slightly

Temp - 22.4

pH - 6.87

Cond - 1.82

Turb - 18.5

10:48 MW-5 cont.

Gallons - 25
pH - 6.99
Cond - 1.82
Temp - 21.7
Turb - 15.0

pump AT
8 GPM
pump AT 32
feet bgs.

10:50
Gallons - 45
Cond - 1.74
Temp - 21.8
Turb - ~~6.91~~ NT
pH - 6.91

clear

10:52
Gallons - 55
Cond - 1.79
Temp - 22.5
Turb - ~~6.90~~ NT
pH - 7.07

stop

MW-4

TD = 50 DTW = 31

CASING VOL = 12.35 4 VOLS = 49.4 GALLONS

11:36 START

GALLONS 15

pH 6.98 clear

cond 1.70 pump AT 8 GPM

Temp 21.7

Turb 15.2

11:40

GALLONS 35

pH 6.96 pump AT 36 feet

cond 1.76 bgs

Temp 21.6

11:41

GALLONS 42

cond 1.82

pH 6.93

Temp 21.6

Turb 29.0

11:43 MW-4 CONT.

pH = 6.90

Cond = 1.80

Temp = 21.7

Gallons = 52

Turb = 12.0

stop

clear

* DSE informed of adjacent property owner will open gate to access wells.

MW-1 TD = 57 BTW = 31.37

casing = 16.9 4 volumes = 67.6 Gallons

12:08 START

Gallons 15 Gal.

pH 6.87

Cond 1.72

Temp 22.3

12:11

Gallons 35

pH 6.88

Cond. 1.73

Temp 22.3

Turb. 19.3

pumping CLEAR

approx 8 GPM

pump @ approx 36'

MW-1 CONT.

12:14

Gallons : 50 Gals.

pH = 6.86

Cond = 1.71

Temp = 22.4

12:16

Gallons = 60 Gal.

Cond = 1.66

Temp = ~~[illegible]~~ 23.0

pH = ~~[illegible]~~ 6.84

Turb = 4.4

12:17 STOP

---

* Equipment Blank - 12:40 (EB-1394)
pour water over pump screen (DI water)

P-3 TD = 58 DTW = 30.42

Casing Vol = 18.2 4 well vols = 72 Gallons

START 12:57

pump AT 2 GPM

pH - 6.99

Cond - 1.88

Gallons - 10

Temp = 24.7

P-3 cont.

13:04	
Gallons - 20	
Temp - 24.1	
pH - 7.06	Silty
Cond - 1.78	3.5 GPM
Turb - — NA	med- recovery
1308	
Gallons - 30	
pH - 6.91	
Cond - 2.06	Silty
Temp - 24.0	back to 1.5-2.0 GPM
	pump on bottom
Gallons: 55	
pH - 6.94	
Cond - 2.01	Sl. silty - clearing
Temp - 26.0	pump at .5-1 GPM
Turb - 140.8	
1313:35	
Gallons - 68	flow at
pH - 7.00	Trickle
Cond - 2.22	clear
Temp - 28.2	
Turb - 6.56	

- Sample MW-5 AT 13:45

Turbidity = 15.09 NTUs

(MW-5-394)

- Sample MW-4 AT 14:09

Turbidity = 10.[illegible] NTUs

(MW-4-394)

MW-7 TD = 53 DTW = 30.88 sq.

Casing Volume = 14 4 volumes: [illegible]

14:48 START

Gallons - 15

pH - 7.20 pump AT 6 GPM

Cond - 0.82

Temp. 23.2

14:52

Gallons: 30

pH - 7.11 clear

Cond - 0.76

Temp - 22.5

Turb. - 27.8

14:55

Gallons - 42
PH - 7.02
Temp - 22.8
Cond - .83

cloudy

Gallons - 62
PH - 7.01
Cond - 0.87
Temp - 22.6
Turb 29.8

STOP
cloudy - clear

Sample MW-1 15:15
Turbidity = 10.0 NTUs
(MW-1-394)

MW-6

TD = 53 DTW = 31.85

1 casing Vol = 13.2

4 vols = 52.8

15:33 START

Gallons - 15
PH - 6.99
Cond - 1.95
Temp - 22.5

pump at
6 GPM

MW-6 cont.

15:38

Gallons - 30

pH - 6.96

Cond - 1.95 clear

Temp - 22.3

Turb - 6.0

15:41

Gallons = 45.0 move pump up - 5 ft

pH = 6.98 Sl. murky

Cond = 1.92

Temp = 22.5

15:43

Gallons = 55

pH - 6.94 STOP

Cond - 1.95 clear

Temp = 22.6

Turb = 6.14

Sample P-3 AT 16:05

Turbidity =

(P-3-394)

Duplicate = P-300-394

sample [redacted] AT 16:15
MW-7

Turbidity = 2.47 NTU's
standing water in well.
(MW-7-394)

---

sample MW-6 AT 16:25
Turbidity = 9.85 NTU's
(MW-6-394)

Leave site TO lab AT 16:30

Terra Tech AT 17:15

unload Equip. out AT
17:40

SEL

3/29/94 8:00AM LEFT FOR SITE
8:30 ARRIVE ON SITE, CHECK IN
+ DECON EQUIPMENT.

P-2 TD=56.00 DTW=31.17

24.83 WT

CASING VOL= 16.2 4 VOL = 64.82

9:30 START

Gallons 15

PH 7.03 CLEAR

TEMP 21.0

COND 1.45

9:41

Gallon 30 PUMPED

PH 7.02 APPROX 35'

COND. 1.83

TEMP 22.0

TURB. 16.50

9:43

Gallon 45

PH 6.97

COND 1.63

TEMP 20.7

9:48

Gallon 65 COND 1.65

PH 6.95 TEMP 22.3

9:50 STOP TURB. 15.23

17

MW-3 TD= 43.50 DTW=30.60

12.90

8.41 Gas vol 4 Gas vol= 33.67

10:10 START

Gallon 15

PH 6.90

COND 1.12

TEMP 23.4

START PUMP
DORK H2O
(ALMOST BLACK)
10 gals
CLEAR

10:20

Gallon 25

PH 6.93

COND 1.24

TEMP 23.3

TURB 53.0

PUMP @
approx 37'

10:24

Gallon 35

PH 6.92

COND 1.34

TEMP 22.9

10:28 STOP

Gallon 45

PH 6.93

COND 1.39

TEMP 23.5

TURB. 332

10:45 DECON EQUIPMENT AND
PURGE NEXT TWO WELLS.

MW-2 TD = 48' (30.81 DTW)
11:02 START 17.19 11.21
GALS/VOL
GALLONS 10 @ 11:04 4 GAS VOL = 44.87
PH 7.02
TEMP 23.6
COND 1.87

CLEAR H2O
PUMP @
APPROX 35'

GALLONS 20 @ 11:06
PH 7.04
TEMP 23.3
COND 2.00
TURB 17.5

GALLONS 35 @ 11:10
PH 6.97
COND 1.89
TEMP 23.5

GALLONS 50 @ 11:13 STOP
PH 6.93
COND 2.03
TEMP 23.5
TURB. 16.5

P-1 TD = 52' DTW = 31.42

20.58 Cas vol = 13.42

4 cas vol = 53.75

11:42 START

Gallons 15 @ 11:48 CLEAR

PH 6.90 Pump @

TEMP 24.1 approx 38'

COND .76

Gallon 30 @ 11:54

PH 6.85

TEMP 24.2

COND .98

TURB 13.8

Gallon 45 @ 12:02

PH 6.84

TEMP 25.2

COND 1.10

Gallon 60 @ 12:08 STOP

PH 6.88

COND 1.11

TEMP 24.7

TURB. 10.2

Sample P-2 @ 1:10
TURBITIY = 13.5
(P-2-394)

Sample MW-2 @ 1:31
TURBITIY = 9.4
(MW-2-394)

Sample MW-3 @ 1:22
TURBITIY = 2.5
(MW-3-394)

Sample P-1 @ 1:43
TURBITITY = 9.8
(P-1-394)

LOAD UP EQUIPMENT &
Fill out C.O.C.
LEFT SITE @ 2:15PM
DELIVER SAMPLES TO LAB
RETURN RENTAL STEAM CLEANER
IN SAN DIEGAS. Drop Samples
off @ 3:25; 3:30 @ RESOURCE
OFFICE OFF LOAD AND END @ 4:00PM

LEVINE-FRICKE

Daily Field Report

Project: CALMAR Project No.: 2455.09

Personnel Inspector: RHF / TWT Day: wednesday Date: 10/1/93

Time On Site: From: 8:13 To: 1:33 From: _____ To: _____ Task No(s): 03

Weather: Clear

Description of Task: water sample monitoring wells - 4

Equipment In Use: water sampling Subcontractors: —

Work Completed (attached copy of field notes): See attached notes.

Special Conditions (Visitors, Corrective Work Required, etc.): _____

Reviewed by: _____

LDR/DYFLDRPT

3:26 Sampled mw-3
Turbidity 3.56

3:36 Sampled P-2
Turbidity 7.56 (Turbidity meter low battery)

3:45 TWT paged on 01

4:06 Sampled mw-4
Turbidity 15.4

Left Site 4:10 Samples to Tetra Tech 5:22
Richard R. Field II

12/1/93 RHF / TWT

Water Sampling

6:30 meet TWT @ Resource office, trucks already loaded left in bay last night.

8:13 Arrived on site (heavy traffic) moved to staging area to begin Decon.

8:46 - moved to MW-5

MW-5

DTW - 30.90 TD - 50

19.1 x 165 = 12.415

4 casing volumes = 49.6 gal

Started pump @ 8:56

Gal	Time	pH	cond	temp	com
10	8:58	6.32	1.92	21.1	clear
30	9:00	6.32	2.06	21.2	
45	9:02	6.35	1.46	21.3	
55	9:04	6.35	1.70	22.3	

Turbidity, 463 →

Stop pump @ 9:04

9:10 moved To P-3

P-3

DTW - 32.12 TD - 58

25.88 x .65 = 16.8

4 casing volumes = 67.3

Turbidity 30.2

(10)

Start pump @ 9:17 5-7 gpm

Gal	Time	pH	cond	Temp	Com
10	9:19	6.42	1.59	21.7	Murky Brown
20	9:21	6.43	1.74	21.8	clear, slightly
35	9:24	6.20	1.57	21.8	cloudy
45	9:30	6.28	1.60	21.8	Less cloud

Well is slow medium recovery
pump at gpm

60	9:35	6.39	1.71	22.9	slightly cloudy
70	9:38	6.55	1.87	23.8	

well is surging

shut pump off @ 9:38

9:46 moved to staging area to steam clean equipment.

9:58 finised steam cleaning + moved to MW-2

MW-2

DTW - 32.22' TD - 48'

15.78 x .65 = 10.26

5 casing volumes = 51.3 gallons

MW-2 cont (11)

Gal	Time	pH	cond	Temp	Comm
10	10:04	8.03	1.81	22.7	Slightly cloud
25	10:06	8.12	2.67	22.5	clear
35	10:09	8.06	2.58	22.5	" still cloud
45	10:11	8.15	2.42	22.9	"
55	10:13	8.25	2.48	22.5	clear

Turbidity 19.1 →

Shut pump off @ 10:15

10:19 - Equipment Blank = EB-2

10:20 moved to P-1

30.93

10:25 - Gauged P-1 - 30.93 DTW, water had collected on this well yesterday (standing Rain water) & is dry today.

P-1

DTW = 30.93' T.D = 52'

21.09 × .65 = 13.69

4 casing volumes = 54.76

Turbidity 17.2 →

(10)

P-1

Start pump @ 10:28

5-7 gpm

Gal	Time	pH	Cond	Temp	comm
10	10:31	8.34	.68	23.6	clear
	well is surging				
20	10:33	8.53	.74	23.0	slight murky
20	10:35	8.29	.84	23.5	milky - oxygen
45	10:39	8.34	.96	23.4	milky - "
50	10:43	8.34	.76	24.4	"

Shut pump off @ 10:44

10:46 - moved to staging area to steam clean equipment + load truck

11:01 moved to mw-5 To sample

11:15 Sample mw-5
Turbidity - 13.48 NTU

11:16 moved to P-3

11:30 Sampled P-3 (Duplicate = P-30)
Turbidity - 3.16

11:31 moved to staging area

11:45 - 12:00 - Lunch

12:07 moved to mw-2 to sample. Turbidity too high droped bailer in will wait for turbidity to drop.

12:16 Sampled P-1
turbidity - 1.40 NTU

- Waiting for mw-2 to clear

12:59 checked mw-2 turbidity still high

1:08 checked mw-5 turbidity @ 19 NTU

1:15 sampled mw-2
Turbidity - 18.0 NTU

Left Site at 1:33
Droped of Samples @ Terra Tech 2:28
Arrived at Resource office unloaded equipment - 3:00

Richard W. Feldt II

LEVINE-FRICKE

Daily Field Report

Project: CALMAR Project No.: 2455.09

Personnel Inspector: RHF/TWT Day: Tuesday Date: 11/30/93

Time On Site: From: 8:40 To: 4:10 From: _____ To: _____ Task No(s): 0.3

Weather: Clear, Rained the night before

Description of Task: Water Sample monitoring wells - 6

Equipment In Use: water sampling Subcontractors: —

Work Completed (attached copy of field notes): See attached notes

Special Conditions (Visitors, Corrective Work Required, etc.): _____

Reviewed by: _____

LDR/DYFLDRPT

11/30/93 RHF/TWT

Quarterly Water Sampling

* Arrived at Resource center at 6:00 a.m. Loaded Truck and left Resource center at 6:38
* Picked up drums at diversified Well products in orange 7:41

Arrived on site 8:40

8:40-9:00 Deconed all Equipment Pumps, hoses, & Sallnist

9:04 Begin Gauging wells

Well	Depth To water	Time
[redacted]	32.22	[redacted] 9:01
MW-2		
P-2	32.59	9:13
MW-1	32.92	9:15
MW-4	32.46	9:20
P-3	32.12	9:22
MW-5	30.90	9:25
MW-6	32.37	9:28
MW-7	32.24	9:30

Wells MW 3 + P 1 are completely submerged under water, will try to pump out water + gauge later. water is from rain storm last night

9:42 moved to purge well MW-6

MW-6

PTW - 32.37 TD - 53

- 20.63 x .65 = 13.4 gallons/casing

4 casing volumes = 53.6

Gal	Time	pH	cond	Temp	comm
(* Calibrate pH + cond. meter 9:52)					
9:55 start pump - 7-10 gpm					
7	9:57	7.64	.206	21.8	Slightly murky w/airbub
15	9:59	7.87	.208	22.9	clear
35	10:01	7.83	.48	22.4	~~slightly murky~~
42	10:03	7.68	.54	23.2	clear
53	10:06	7.62	.47	22.3	clear

10:07 stopped pump

Turbidity 5.2 →

10:13 moved to mw-7

mw7

DTW 32.7 TD 53.5

20.8 x .65 = 13.52

4 casings volumes = 54.08

Gal	Time	pH	cond	Temp	comm
10:19	Start pump - 7-10 gpm				
17	10:21	8.37	.47	22.1	slightly murky
25	10:26	8.27	.42	22.7	"
33	10:30	8.14	1.20	22.9	murky + clear
42	10:33	8.25	.53	22.9	Clear
50	10:35	8.14	.52	22.8	

7.60 Turbidity →

Stop pump at 10:37

Sampled mw-6 - 10:48

Turbidity → 4.0

Sampled mw-7 - 10:56

Turbidity - 2.2

10:56 moved to decon area

11:17 Finished Decon pumps + hoses

11:19 moved to mw-1

mw-1

DTW 32.92 TD 57

24.08 x .65 = 15.65

15.65 x 4 = 62.61 gallons

Start pump 11:28 (7-10 gpm)

Gal	Time	pH	cond	Temp	comm
5	11:29	8.12	.47	22.0	slightly
15	11:31	7.04	1.39	21.6	murky
	Turbidity Approx 8.5				less
30	11:35	7.60	1.42	21.7	clear
55	11:37	7.65	.52	22.0	

Turned off pump at 11:40

11:44 moved to well MW-3

mw-3

~~DTW~~

well box flooded w/ water
had to hand bail w/ paper
cup to take DTW Reading

MW-3

DTW - 31.96 TD - 43.5

11.54 x .65 = 7.50

5 casing volumes = 37.5 gallons

Start pump @ 11:55

Gal	Time	pH	Cond	Temp	Comm
5	11:56	9.10	.46	23.0	(Brownish in color)
15	11:58	9.08	1.24	24.0	(clear (Less Brown)
30	12:02	9.45	.48	23.0	(Brownish in color)
45	12:05	9.09	.39	23.0	milky in color Organated
	[Turbidity Approx 17.2]				
50	12:08	8.80	.52	23.0	clear

Shut off pump at 12:08

12:24 Sampled MW-1

Turbidity - 15.0

12:38 Sampled MW-3

Duplicate sample taken - MW-30

Turbidity - 28.0

12:44 - Lunch
1:30 - 1:49 Deconed Equipment
pumps, hoses

1:50 moved to P-2

P-2 - under trailer on W side

DTW = 32.59 TD = 56'
23.41 x .65 = 15.2

4 casing vol = 60.8

Start pump @ 2:00

Gal	Time	pH	Cond	Temp	com
10	2:02	8.5	2.33	22.3	clear
30	2:06	8.51	2.27	22.6	"
40	2:08	8.46	2.27	22.6	"
55	2:10	8.42	2.03	22.5	"

Shut pump down @ 2:11

2:15 moved TO MW-4

18.0 Turbidity →

MW-4

DTW = 32.46 TD = 50

17.54 x .65 = 11.4

4 ~~volume~~ casing volumes = 45.6 gal

2:26 - Equipment Blank EB-1

Start pump @ 2:33

Gal	Time	pH	cond	Temp	comm
10	2:34	8.55	2.10	21.7	murky
30	2:36	8.44	1.97	21.5	Less murky
40	2:40	8.31	2.02	22.0	murky
50	2:42	8.32	2.02	21.6	clearer

Turbidity of 40 →

Shut off pump @ 2:43

2:50 - 3:09 - Loaded equipment Droped off full drums in decon / staging area

3:09 moved to Resample MW-3 Because turbidity was too High when first sampled.

LEVINE-FRICKE

Daily Field Report

Project: Calmar Project No.: 2455 - ?

Personnel Inspector: MCS Day: Tues. Date: 8-31-93

Time On Site: From: 7:45 To: 13:13 From: _____ To: _____ Task No(s): 10

Weather: hot, sunny

Description of Task: sample nested soil-vapor monitoring wells

Equipment In Use: None. Subcontractors: TerraTech mobile lab

Work Completed (attached copy of field notes): Sampled multi-port nested soil-vapor wells NVP5 and NVP16 (off-site). A total of 8 sampling points. See attached field notes for preliminary results.

Special Conditions (Visitors, Corrective Work Required, etc.): None.

Reviewed by: _____

LDR/DYFLDRPT

8-31-93 (258) m sucks MCS-Calmac

Purge = 2 volumes

Soil-Vapor Sampling

0845 arrive on site, open gate, locate NVP5 & NVP6

0815 call office to see what is holding lab up

0830 Brian (Terra Tech) is on his way - thought start time was 8:30

0855 Terra Tech arrives

0910 connect to NVP5-1 @ 5'

0926 Purging NVP5-1

0927 Collecting NVP5 1

0938 Connect to NVP5-2 @ 10'

0950 Purging NVP5 2

0951 Collecting NVP5 2

0924 Collect NVP5-3 @ 20'

1103 Collect NVP5-4 @ 23.5'

11:30 Collect NVP6 1 @ 5'

11:57 Collect NVP6-2 @ 10'

1 [illegible] NVP6 2

12:17 Connecting to NVP6-3 @ 20', collect

12:30 Collecting NVP6-3

12:44 Recollect to re-sample NVP6 3

GC not out right when started

12:47 Re-collect NVP6-3

(2)

MCS 8-31-93

1308 Purging NVP6-4 @ 23'

1307 Collect NVP6-4

1315 close well, clean up

1330 waiting for results

(1)

8-31-93 | | | | | mcs

Depth -	5'	10'	20'	28'
well -	NVPS-1	NVPG-2	NVPG-3	NVPS-4
~~TCA~~	~~1.1~~ mcs			
1,1-DCE	ND	2.9	2.1	ND
1,1,1-TCA	1.1	3.4	2.0	ND
TCE	ND	8.3	4.9	ND
PCE	ND	ND	ND	ND

	5'	10'	20'	28'
	NVPG-1	NVPG 2	NVPG 3	NVPG-4
1,1-DCE	6.8	100	140	98
1,1,1-TCA	5.8	11	13	3.1
TCE	5.1	48	181	3.2
PCE	2.2	36 mcs	37	10

LEVINE•FRICKE

Daily Field Report

Project : Calmar Project No. 2445

Personnel Inspector: Scott Martin Day: Thur. Date: 8-26-93

Time On Site: From 11:10 To 11:55 ; From — To — Task No(s) : ____

Weather: Clear, Sunny Hot

Description Of Task: Collected soil samples from bin and water samples from Tank

Equipment In Use: LF: ____ Subcontracts: ____

Work Completed (Attached copy of field notes) :

- Collected sample Tank-1 from ~~Tank~~ Rain-for-Rent Tank to profile water for disposal - being analyzed at Terra Tech for 8010 and 8020.
- collected samples bin-1 and bin-2 from Greenfield soil bin to profile soil for disposal - being analyzed at Terra Tech for 8010 and 8020.

Special Conditions (Visitors, Corrective Work Required, etc.) : ____

Reviewed By: ____

L-Forms 25AUG88

LEVINE-FRICKE

Daily Field Report

Project: Calmar Project No.: 2455.08

Personnel Inspector: DSE Day: Tuesday Date: 7-20-93

Time On Site: From: 8:25 To: 3:40 From: _____ To: _____ Task No(s): _____

Weather: Mild, breezy

Description of Task: Installation of well MW-7 + vapor probes

Equipment In Use: Red truck, Fid, Seive. equipment Subcontractors: Gregg Drilling

Work Completed (attached copy of field notes): See attached

Special Conditions (Visitors, Corrective Work Required, etc.): Driller backed up into the L-F "Red" truck, moderate damage occurred.

Reviewed by: _____

LDR/DYFLDRPT

7/20/93 DSE (4)

8:25 I arrived on site
The location chosen for MW-7 is between the berned former storage area against the wall (labled: "NO SMOKING, Flammable Liquid"), and the stairway area where Tim Ellis said someone thought there had been a cleaning/washing area.

9:50 Drillers begin hand augering the first 4-feet of soil
- Sampled each 5-foot interval down to 50'
- Small auger removed + large auger (with plug) drilled to 54'
- Essentialy same well completion as MW-6 (casing 1 foot higher)
- Same probe intervals (silt layer probes)
- 2:46 The drilling was driven from the well location. The Driller (Craig) backed the rig up and crashed into the Levine-Fricke truck that was parked

7/20/93 LSF (5)

in the front parking lot.
3:10 I departed the site &
arrived @ Terra Tech labs ~ 5:00
pm - Signed over the samples
to Terra Tech & departed for
the LF field office

[illegible]
7/20/93

LEVINE-FRICKE

Daily Field Report

Project: Calmar Project No.: 2455.08

Personnel Inspector: Don Eley Day: Monday Date: 7-19-93

Time On Site: From: 10:00 To: 5:27 From: _____ To: _____ Task No(s): _____

Weather: clear & mild, slight breeze

Description of Task: Installation of well MW-6 & vapor probes

Equipment In Use: leased truck, FID, sieve equipment Subcontractors: Gregg Drilling / Goldark

Work Completed (attached copy of field notes): See Attached

Special Conditions (Visitors, Corrective Work Required, etc.): Dave Fielt + Ian Golte also on site in AM. Frank Ellis indicated where he thought "washing" had occurred (on adjacent property)

Reviewed by: _____

LDR/DYFLDRPT

7/19/93

- Work to include MW-6 & MW-7.
- Dave Field arrived on site @ 8:30 and cleared the drill locations with "Goldack" utility locators.
- Gregg drilling prepared to begin drilling
- One Role of top soil bin was delivered and placed on Calmar property
- Ian Goltz arrived @ ~ 9:30
- I arrived @ ~ 10:00. The drillers began to break through the asphault pavement & proceded to hand-auger the first 4 feet of the MW-6 borehole
- John Gregg arrived & observed the work

10:25 Dave Field departed the site. Ian departed @ ~ 10:40

~10:50 John Gregg departed the site

- Small OD auger drilled & sampled down to 52½'. A soil sample was taken every 5 feet & then from 52½'. Samples were not retained for chemical

7/19/93 (2)

analysis from below the water table (which was encountered @ ~32 feet bgs surface).

- 12:50 The small auger has been removed from the borehole and the Driller is recentering with large OD auger. The lead auger has a wooden plug in the tip to prevent heaving sands from entering the auger.
- 1:00 The drillers left the site for lunch.
- I have begun the sieve analysis for this well.
- 2:30 The drillers have returned. The wooden plug was knocked out & the casing set. 11 bags of #2-12 sand were used as sand pack to 2 feet over the screen. The sand was sounded to make sure it settled. a bentonite seal was placed (pellets) & then 2-foot sanded zones were placed

7/19/93 (3)

around vapor probes @ 28', 20', 10' & 5' BGS. Bentonite (hydrated) chips were placed between the sanded probe intervals

- Probe tips were of stainless steel & the tubing is Teflon.

5:00 the general area was cleaned up

5:27 the drillers & I left the site.

6:17 I signed over the soil samples to Jeff @ Terra Tech Labs in Santa Ana

CALMAR
2455-09

(29)

8-10-93 SAF

Water Sampling

8:30 - Arrived on site w/ice for samples
- asked gaurd to open gate for access to Proctor the

8:45 - set up staging area and steam cleaned for first well

9:30 - setting up at MW-7

33.75

MW-7

DTW = 33.75 Well Vol = 12.8
TD = 53.5
5 Vol = 65 gal Start @ 9:53

Gal	Time	pH	Cond	Temp	Remark
~~9:54~~					
5	9:54	6.90	1.2	23.4	Sl cloudy
15	9:56	6.85	1.2	23.7	"
25	10:00	6.73	1.3	23.7	clearing

(30) CALMAR 2455-
SAF 8-1043 (31)

Gal	Time	pH	Cond	Temp	Remark
35	10:03	6.71	1.4	23.9	clearing
45	10:07	6.70	1.3	23.5	"
65	10:14	6.67	1.4	24.0	"
75	10:17	6.72	1.4	27.6	"
85	10:20	6.74	1.4	23.9	"
	1:50		3.54 NTUs		sample

10:29 - stopped purge
total purge 105 gal
Returned to staging
area for steamclean &
H_2O transfer into
Baker tank

11:20 - Obtained equipment
blank ~~(936WMW~~
(936WEQ012B)

12:00 - Moved to MW-6
for purging

MW-6
TD = 53'
DTW = 33.76
SVol = 63 gal

Well Vol = 12.5
Start @ 12:19

Gal	Time	pH	Cond	Temp	Remark
10	12:20	6.80	1.5	25.2	slcloud
20	12:22	6.67	1.5	27.5	"
40	12:25	6.62	1.5	26.2	Clearing lower pump
70	12:30	6.64	1.5	26.0	cloudy
90	12:32	6.69	1.5	23.2	"
110	12:35	6.69	1.5	24.9	clearing

12:35 - Stopped pump

1:05 - returned to staging
area to transfer H_2O
and pack up equipment

1:45 - Returned to MW-7
for sampling (936WMW072B)

1:50 - Sampled MW-7
3.54 NTUs

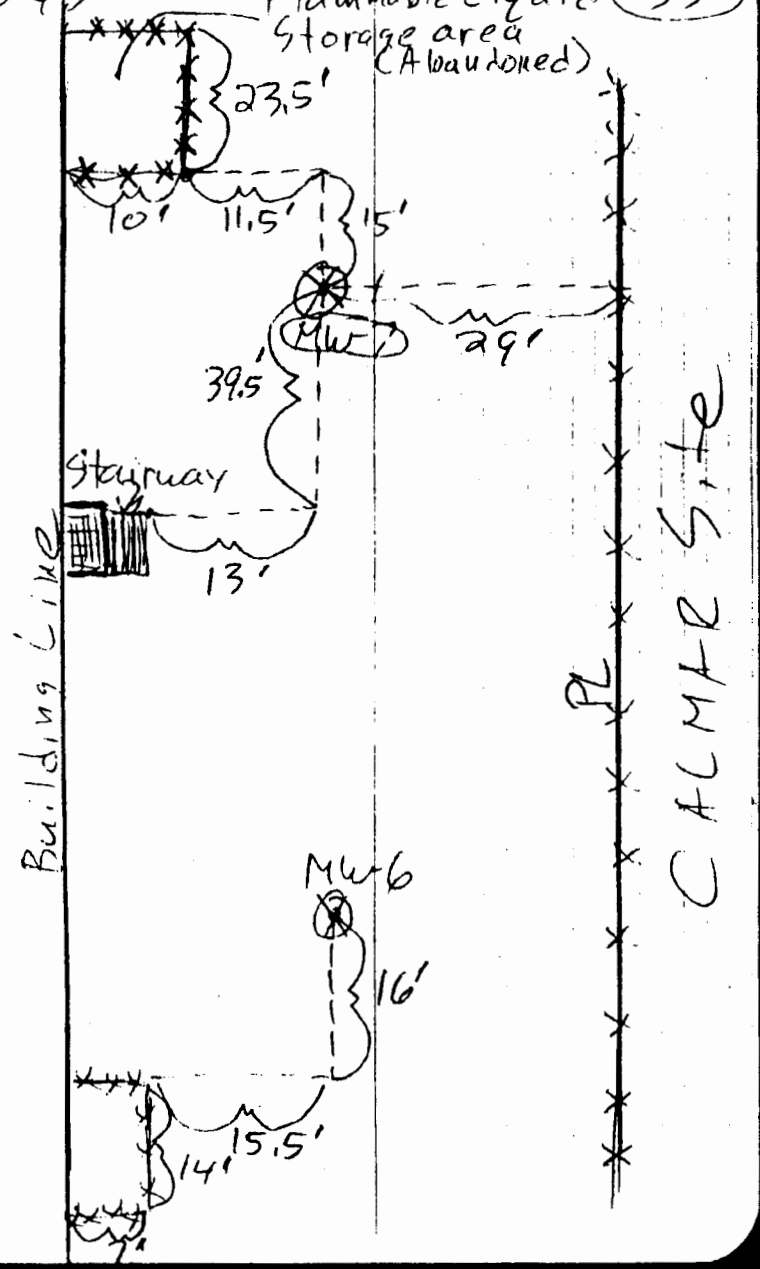
2:00 - Sampled duplicate
@ MW-7 (936WMW172B)

(32) CALMAR ~~2455-0~~
SAF 8-10-93

2:15 - Moved to MW-6 for sampling
135 NTU's - wait for water to settle
2:35 - Called Don Eloy to relay message
2:50 - measuring proximity of MW-7 & MW-6 to building structures
3:30 - sampled MW-6 again
95 NTU's

4:30 - Sampled MW-6
70 NTU's (93GWMW062B)

4:45 - Off site



LEVINE•FRICKE

Daily Field Report

Project : CALMAR Project No. 2455

Personnel Inspector: SAF Day: Mon Fri / Mon Tues / Wed. Date: 7-26-93 / 7-30-93 / 8-2-93 / 8-3-93 / 8-4-93

Time On Site: From _____ To _____ ; From _____ To _____ Task No(s) : _____

Weather: _____

Description Of Task: Well Development, Quarterly H_2O Sampling

Equipment In Use: LF: _____ Subcontracts: Soil/Gas Survey

Work Completed (Attached copy of field notes) : See Attached Field Log Notes

Special Conditions (Visitors, Corrective Work Required, etc.) : _____

Reviewed By: _____

LFform 25AUG88

7-26-93 SAF CALMAT 2455 (6)

7:00 Arrived on site
West Hazmat & surveyors
- No key to lock
- Surveyors hopped fence to work on wells
- Called office for site contact & asked neighboring business for key
9:15 Mike Steward showed up w/key to gate
9:30 began surging MW-7
9:50 finished surging - began bailing
- bailed ~ 20 gals
10:00 started pumping using West Hazmat rig [illegible]
DTW = 39.68 (MW-7) di[illegible]
TD = 53.44 into [illegible]
10 vols = 127 gals
→ started pumping @ 10:15 ~15 [illegible]

Gals	Time	pH	Cond	[illegible]	[illegible]
20	10:00	6.81	1.5	222	[illegible]
35	10:16	6.96	1.5	232	Sta[illegible]
	10:17	- Shut down pump well ran dry			

SAF [illegible] 2 [illegible] 7-26-[illegible]

Gals	Time	pH	Cond	Temp
	10:26			
	10:40	– shut down pump switchover 2" pump – [illegible] to [illegible] well [illegible]		
	11:00	– [illegible] 2 ~29 gpm		

*Attached Soil/Gas Connectors

Gals	Time	pH	Cond	Temp
40	11:04	6.71	[illegible]	[illegible]
	11:07	– pump start[illegible] problem w/[illegible] flow		
	11:16	– startup ~1.5 gpm		

Gals	Time	pH	Cond	Temp
45	11:20	6.66	[illegible]	[illegible]
	11:26	– pu[illegible] telling well [illegible]		
	12:05	– [illegible] ~1.5 gpm		

(8)

Gal	Time	pH	Cond	Temp	Remark
55	12:11	6.61	1.5	23.2	murky
[illegible]	12:14	6.65	1.5	23.1	"

12:15 - pump down - recharge well
12:[illegible] - pump ~1.5 gpm

Gal	Time	pH	Cond	Temp	Remark
85	[illegible]:57	6.61	1.5	23.5	cloudy
85	[illegible]:00	6.61	1.4	23.0	"

1:00 - Pump down - recharge
[illegible] - Start up

Gal	Time	pH	Cond	Temp	Remark
[illegible]	[illegible]:40	6.56	1.5	23.8	sl. cloudy
[illegible]	[illegible]:42	6.61	1.6	23.8	"

[illegible] pumping @ 100 gals
[illegible] cleared to slightly cloudy
[illegible] to MW-6
[illegible] cowned equipment

[illegible] 80

STA[illegible] ALTMAR 7-26-93
2455 (9)

2:00 - Began bailing silt sand out of MW-6 bottom
- bailed total of ~30 gal
2:10 - began surging well
2:30 - finished [illegible]
bailing again ~ 45 [illegible]

Total bail ≈ 75 gal

MW-6

DTW = 3.80
TD = 53.22
10 vol = 126 gal
- Start 2" pump @ 2:40

Gal	Time	pH	Cond	Temp	
55	2:33	6.71	1.0	[illegible]	
85	2:43	6.63	1.3	[illegible]	
~~95~~	~~2:44~~				
95	2:46	6.61	1.1	25.2	
105	2:49	6.60	1.0	[illegible]	
120	2:54	6.56	1.0	[illegible]	
135	2:59	6.54	1.0	24.[illegible]	"
150	3:04	6.55	1.0	24.[illegible]	"
165	3:09	6.53	1.0	24.5	"
180	3:14	6.52	1.0	25.2	"
195	3:19	6.53	1.0	24.0	

SAF CALMAR 7-26-93
2455

(10)

- total of 200 gal bailed & pumped
- H_2O sl cloudy to cl
- installed vapor probe
3:40 - After decon unit back to MW-7 to pump additional H_2O
3:56 - stopped pumping
- add 125 gal pumped
→ Total of 125 gal purged from MW-7
4:50 off site

SAF
7-26-93

CALMAR
2455

7-30-93 (11) SAF

Quarterly Water Sampling

8:00
Arrived on site & set up staging area near Baker tank

8:30 Went to pick up ice for samples

9:00
Began Gauging all wells

Well	DTW	Time
MW-1	34.62'	9:18
MW-2	33.86'	9:28
MW-3	33.71'	9:35
MW-4	33.96'	9:23
MW-5	32.31'	9:20
MW-6	33.87'	9:15
MW-7	34'	9:12
P-1	32.76'	9:45
P-2	34.25'	9:40
P-3	33.96'	9:55

10:00 - steam cleaned equipment to start purging well P-3

P-3 (12) CACMAR 2455

DTW = 33.86
TD = 58 Vol = 15.6 gal
5 Vol = 78 gal

Gal	Time	pH	Cond	Temp	Remark

10:30 - equipment problems - pump motor not spinning & is breaking circuit in generator.
11:30 called John Gonzales & he will arrive in ~1 hour w/parts and another pump for trouble shooting
12:00 - Talked w/Don Eley to update on situation
- He decided to cancel operations today & have pump repairs take place in resource office
12:30 - off site
2:00 - Arrived field office to help repair pump for Monday

7-20-93
SAF

8-2-93 (13) SAF

Quarterly Water Sampling

8:15 Arrived on site after picking up ice for samples
- Set up staging area & steam cleaned equipment for purging
9:15 - setup @ P-3

P-3 Using value to slow
- slow recovery
DTW = 33.17 Well Vol = 16.14
TD = 58
5 Vol = 80.7 gal Started pumping @

Gal	Time	pH	Cond	Temp	Remark
5	9:41	6.83	1.4	23.0	St. cleaning
15	9:44	7.17	1.2	23.9	"
20	9:47	7.14	1.2	24.1	"
30	9:53	6.90	1.4	24.2	cleaning lowered pump
	9:55				
40	10:03	6.91	1.4	26.0	cleaning
50	10:16	6.88	1.4	24.9	"
	10:22				Stop recovery

STF CALMAIC .55
8-2-93

Gal

to 0.7
stop pump

25.0 clear
26.0 "
26.0 "
stop pump
1.53 NTUs Sample

Staging area 3375

MW-2

3375 well Vol. = 9.26
medium vacuum
5 Vol
Start pump
@ 12:01

Gal		pH	Cond	Temp	Remark
10		6.84	1.7	25.0	slight cloudy
20		6.97	1.7	24.1	"
40		6.87	1.6	23.7	"
50			1.6	26.5	clearing
60			1.7	28.0	"
70			1.6	20.0	"
80		6.83	1.6	26.4	clear
	4:30		5.4 NTUs		Sample

2.40 - rau
gas (no gas
had to
gas
1:15 - returned
to transfer Ha
1:40
to
2:10 - sampled
60 NTUs
next well
2:40 - sampled equipment
MW-2 &
3:00 - Moved to
Purging
P-1

DTW = 32.62 Well
TD = 52 - m
5 Vol = 63 Gals
Star

SAF - CALMAK 2-5
8-2-93

(cont) MWs (17)

Gal	Time	pH	Cond	Temp	Remark
20	3:20	6.98	0.7	23.5	sl. cloudy
30	3:27	6.81	1.0	24.1	clearing
40	3:30	6.88	1.0	25.0	"
50	3:33	6.77	1.1	24.1	"
60	3:38	6.88	1.2	24.1	Raised & lowered pump
70	3:41	6.90	1.2	23.6	clearing
80	3:44	6.78	1.1	24.1	"
	6:20		1.57 NTUs		sample

3:45 - stopped purging P-1
steamcleaned & transferred water

4:20 - Set up @ MW-3
4:30 - Sampled MW-2 5.4 NTUs

MW-3

DTW = 33.59
TD = 43.5
SVol = 32 gal

well Vol. = 6.9
- slow recovery
started pump @ 4:40

Gal	Time	pH	Cond	Temp	Remark
5	4:42	6.92	0.8	25.4	cloudy
15	4:44	6.90	1.0	24.9	sl cloudy
20	4:47	6.68	1.1	25.2	"
30	4:50	6.89	1.2	24.3	clearing
40	4:53	6.78	1.2	24.3	"
50	4:56	6.68	1.3	24.3	clearing raised pump
	4:57				
60	4:59	6.69	1.3	24.2	
70	5:02	6.88	1.3	24.6	still clearing
	6:40		5.03 NTUs		sample

5:02 - shut down pump
- went back to staging area & transferred water
- broke down equipment & packed up

6:15 - Went back to P-1 for sampling
1.57 NTUs

6:40 - Sampled MW-3 - sampled duplicate
5.03 NTUs

7:00 - Began Custody Seals and Chain of Custody Paperwork

8-2-93
SAF

CAC MAR
2455

Sec. 19 old wells
Sec 4 new wells
8-3-93

(18)

Soil gas Sec. 15
3 step 10' MW 7

SAF

Quarterly Water Sampling

7:15 - Arrived on site after picking up ice for samples
- set up staging area & steam cleaned for purging

8:00 - Set up for purging @ MW-1

MW-1 - good recovery

DTW = 34.54 Well Volume = 14.6 gal
TD = 57
5 Vol = 73 gal started pump @ 8:14

Gal	Time	PH	Cond	Temp	Remark
5	8:15	6.91	1.2	22.7	sl. cloudy
10	8:17	6.93	1.2	22.6	clearing
20	8:20	6.99	1.2	22.7	clear
40	8:22	6.98	1.2	22.4	"
66	8:24	7.02	1.2	23.1	"
					raised pump

SAF 2455

(19) CALMAR

Gal	Time	pH	Cond	Temp	Remark
95	8:27	6.99	1.3	22.4	clear
	12:30		7.01 NTUs		sample

8:30 - stopped pump total 110 gal purged

8:45 - steam cleaning & transfer H_2O

9:20 - Moved to P-2 for purging

P-2

DTW = 34.15'
TD = 56
Svol = 71 gal

Well Volume = 14.2
- good recovery
start pump @ 9:48

Gal	Time	pH	Cond	Temp	Remark
5	9:49	7.18	1.2	23.2	clear
10	9:51	6.87	1.3	23.1	"
20	9:54	6.75	1.4	23.0	"
40	9:57	6.81	1.3	22.7	"
60	9:59	6.91	1.4	22.5	"
80	10:01	6.92	1.3	23.0	"
100	10:03	6.74	1.4	22.4	"

P-2 (cont) 1:00 (20) 1.94 NTUs sample

10:03 - Shut off pump

10:20 - steam cleaning & H_2O transfer

10:50 - Set up @ MW-4 for purging

MW-4

DTW = 33.84
TD = 50'
S Vol = 53 gal

Well Vol. = 10.5
- good recovery
start pump @ 11:11

Gal	Time	pH	Cond	Temp	Remark
10	11:13	6.98	1.4	25.0	cloudy
20	11:14	6.90	1.3	25.7	sl. cloudy
40	11:17	6.91	1.3	23.7	"
60	11:19	7.01	1.3	23.6	clearing
85	11:22	6.98	1.3	23.5	"
100	11:24	6.99	1.4	24.1	clear
	3:25				sample

Pump off @ 11:25 0.35 NTUs

11:45 - transfer H_2O

(21) SAF CACMAR 2455

12:30 - Sampled MW-1 7.01 NTUs

1:00 - Sampled P-2 1.94 NTUs

1:15 - steam cleaned for next purge

1:35 - setting up @ MW-7 for purging

MW-7

DTW = 33.72
TD = 53.5
5 Vol = 64 gal

Well Vol. = 12.9
- slow recovery
Pump start @ 2:00

Gal.	Time	pH	Cond	Temp	Remark
5	2:01	7.07	1.4	29.7	sl. cloudy
15	2:04	6.96	1.4	28.8	cloudy
20	2:07	6.95	1.5	28.6	"
30	2:10	7.00	1.5	29.0	sl. cloudy
					lowered pump
40	2:16	6.96	1.6	28.1	sl. cloudy
50	2:20	7.01	1.6	28.6	clearing
55	2:25	7.00	1.6	28.7	"

(22)

Gal.	Time	pH	Cond	Temp	Remark
65	2:30	7.00	1.6	26.2	Clear
70	2:32	6.97	1.6	27.2	"
75	2:35	6.92	1.6	26.2	sl. clear
	6:30				

* Turbidity sample meter not working

2:37 - shut down pump

2:50 - steam cleaned transfer H_2O

3:25 - sampled MW-4 0.35 NTU's

3:40 - moved to MW-6 for purging

MW-6

DTW = 33.84
TD = 53
.5 Vol = 62 gal

Well Vol = 12.5
- fast recovery
Start pump @ 4:09

Gal	Time	pH	Cond	Temp	Remark
10	4:11	7.08	1.6	24.8	sl. cloudy
20	4:13	6.97	1.5	24.7	clearing
40	4:16	6.86	1.5	25.6	"
60	4:20	6.86	1.6	23.1	Clear w/air bubbles

(23) SHT - CALMAR 2 8-3-93

Gal	Time	pH	Cond	Temp	Remark
70	4:22	6.85	1.6	25.6	clear
	8:00				* Turbidity Sample Meter not working

4:23 - shut down pump

4:40 - staging area to transfer H_2O

5:00 - Gas Lux for generator

5:15 - Continue transfer of water & steam clean

5:35 - Obtained Equipment blank between MW-6 & MW-5

5:50 - Set up to purge MW-5 3218

MW-5

DTW = 32.18 Well Vol = 11.6 gal

TD = 50 - first recovery

5 Vol = 58 gal Start pump @ 6:04

Gal	Time	pH	Cond	Temp	Remark
5	6:05	7.10	1.2	23.8	Sl. Cloudy
10	6:06	6.95	1.4	23.8	"

(24)

Gal	Time	pH	Cond	Temp	Remark
30	6:08	6.92	1.3	24.3	Clearing
50	6:10	7.02	1.4	22.7	clear
65	6:12	6.98	1.5	24.7	raised pump
80	6:14	6.97	1.5	22.5	clear
	8:25		* Turbidity Meter Not working		sample

6:14 - Shut off pump

6:30 - Sampled MW-7 Turb. Meter Not working

~~6:45~~ back to staging area to transfer H_2O & pack up supplies

* Meter was acting up during sampling for MW-1 - called Enviro. Inst. & rep. said it should have enough charge for what little time we are using it. He offered another in exchange. At that time the meter was reading correctly

→ Meter when malfunctioning reads 2 decimal points and 3 digits constantly changing

(25) CALMAR 2455

8:00 - Sampled MW-6 again No NTU meter for turbidity

8:10 - sampled duplicate MW-6

8:25 sampled MW-5 No turbidity

8:40 off site

9:45 - arrived @ field office & placed samples in refrigerator with samples from Monday - will deliver to lab AM Wed.

8-3-93

* Additional Note: for all purging a water plumbing valve was used to control water flow. This technique was very effective for slow recovery wells. SAF

(26)

8-4-93 SAF

Soil Gas Survey

6:45 - stopped @ field office to pick up samples from Monday & Tuesday

7:00 - delivered samples to Terratech lab

8:00 - Arrived on site & met w/ Brian w/Terratech. - He is calibrating equipment

8:40 - Moved mobile lab from Calmar site to property to the SW where MW-6 & MW-7 are located.

8:55 - Started on MW-7 @ 10' level with 3 step purge test.

10:35 - finish 3 step test - Called DSE with results - Decided on 2 volumes per test

(27) SAF CALMAR 2155
8-4-93

10:45 - Began running MW-7 @ 5' purge test (2 vol.)

11:05 - Began running MW-7 @ 20'

11:20 - Began running MW-7 @ 28'
- Some water came up through vapor probe
- not solid stream - small amount
- Brian let sample run

11:40 - finished with MW-7 moved over to MW-6

11:55 - began sampling MW-6 @ 5'
12:20 - began sampling MW-6 @ 10'
12:40 - began sampling MW-6 @ 20'
1:15 - sampled MW-6 @ 28' @ end of purge, water began comming up tube
- solid stream this time
- sample was obtained (gas)
2:00 - pulled off location & returned to CALMAR site for lab QC

(28)

Results of tests

	MW-7						MW-6			
	2 5	10	10	10	20	28	5	10	20	28
1,1,-DCE	13	34	33	38	43	11	4.6	5.2	5.7	4.7
1,1,-DCA	ND	1.4	1.2	1.4	1.5	ND	ND	ND		
C,1,2,DCE	1.0	1.3	1.2	1.3	1.2	ND	ND	ND		
1,1,1-TCA	5.3	4.6	3.5	4.4	3.7	ND	3.0	1.1		
-TCE	7.6	15	12	15	17	ND	ND	3.5	2.1	ND
-PCE	2.9	9.3	8.1	11	8.9	ND	ND	ND		

* Results are preliminary - subject to change when final printout arrives

2:15 - off site
Brian remained to complete QC tests

8-4-93
SAF

AF (12) 7-27-95

Gateway 2825.05

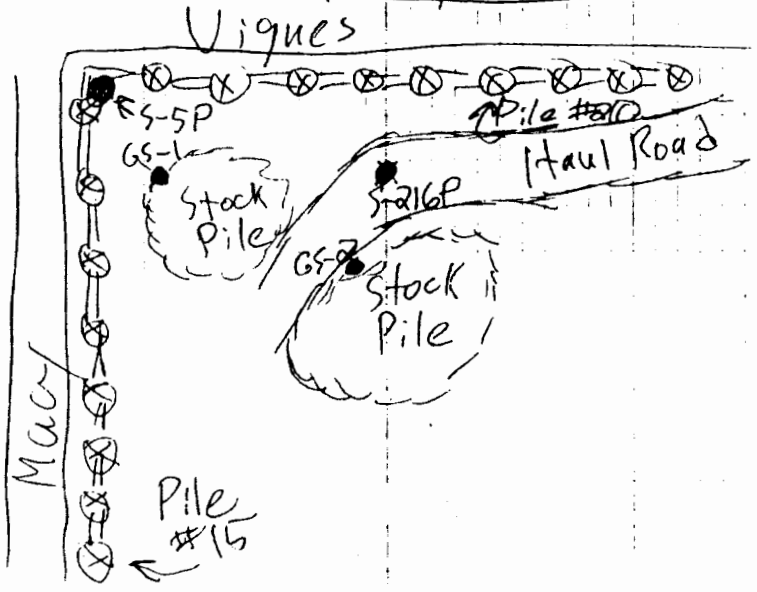
11:00 - Arrived on site & met w/ Terry Vernon of Pankow & Greg of Caler. They directed me to the southeast portion of the excavation (Piles 5-15 and 210-230). According to Greg, the affected soils were found as a lense ≈ 12"-18" thick in this area. Most has been scraped up and placed into piles.

- First sample taken in haul road adjacent to pile 216 (photo). Greg mentioned this area might still have in place affected soils. *S-216P
- Second sample taken at base of wall next to pile #5 (photo) *S-5P
- Third sample taken from SE most stock pile. These soils have stronger hydrocarbon odor than

(13)

any remaining in place affected soils. * GS-1
- this sample is a siltyer material
- Fourth sample taken from another stock pile located across haul road from pile #210 (photo)

* Soils in piles have stronger odor than those remaining in place



SAF (14) 7-27-93
2825-05

OVA Results:

S-5P = 4 ppm
S-216P = 6 ppM
GS-1 = 30 ppm
GS-2 = 30 ppm

1:00 - Off site
Travelling direct h/to
Terra Tech

2:15 - Arrive @ Terra Tech

SAF (9)
Calmar 2455-08 7-26-93
Mike Steward
neighboring office
Valley toward 605 rt Temple
pass tracks thru signal
Amer. Auction
7:00 Onsite - met West
Hazmat rep. & surveyors.
Unable to get into neighboring
gate to develop & survey
wells. Called Don Eley &
told him our lock is no longer
in sequence w/ main lock.
Waiting for Mike Steward
to arrive @ office
9:15 Mike Steward arrived &
opened up lock to gate.
9:20 - Began work on MW-7
- started with bailing out
some of silts & sands before
surging ~ 18 gals
9:35 - began surging well
9:55 - finished surging
- bailed some more
- total bailing 20 gals
- original DTW - 33.88'
- total depth - 53.44'

SAT ~~2455-082~~ 7-26-93

(10)

10:15 - started pumping ~15 gpm w/ 4" pump - muddy H_2O

10:17 - shut down pump - well dry

10:20 - tryed slowing pump down using valves in line w/ hose - unable to do so.

10:40 - shut down pump - switch over to 2" pump w/ variable speed * Attached soil/gas probe connectors to hoses

11:00 - start up w/ 2" pump

11:07 - shut down pump - problem w/ current flow

11:16 - start pump ~1.5 gpm

11:26 - pump down - well dry

12:05 - start up - 1.5 gpm

12:15 - pump down - well dry

12:5 - startup

1:00 - pump down - well dry

1:39 - start up

1:45 - stopped purging MW-7 total vol ≈ 100 gal.

* Did not purge 10 volumes due to time restriction - well recharge time ~ 30 min up to 40' bgs. Water became slightly cloudy

(11)

which cleared up from very muddy in the beginning

2:00 - Moved to MW-6 bailed ~ 30 gal silty water out

2:10 - Began surging

2:30 - finish surging - bailing a bit more total of 75 gal bailing

2:40 - Started pumping w/ 2" pump @ 3.0 gpm

3:20 - stopped pumping - total of 200 gal bailed & pumped * installed vapor probe tips - H_2O is cloudy to clear

3:40 - returned to MW-7 after decon - pumping additional volumes add'l 25 gal total of 125 gal MW7

4:50 - off-site

SAT
7-26-93

LEVINE•FRICKE

Daily Field Report

Project: Calmar Project No. 2495-07 (?)

Personnel Inspector: MCS Day: Mon Date: 6-28-93

Time On Site: From 6:55am To 5:30pm ; From _____ To _____ Task No(s) : _____

Weather: overcast, cool, foggy

Description Of Task: soil-vapor sampling

Equipment In Use: LF: Rangers Subcontracts: TerraTech - mobile lab

Work Completed (Attached copy of field notes) : sampled and analyzed 4 nested soil vapor wells: NVP1 (5 probes), NVP2 (5 probes), NVP3 (5 probes), NVP4 (6 probes). Three ~~samp~~ probes on NVP4 (NVP4-1, NVP4-2, and NVP4-3) were re-run because concentration of PCE was off-scale. A total of 24 runs were performed.

Special Conditions (Visitors, Corrective Work Required, etc.) : Charles Cheng of the RWQCB from 10:15 to 12:00.
LF sample labels attached to probes in NVP3 (tags are falling off). Water in NVP3-5 - sample retrieved before 2 full volumes were purged.

Reviewed By: _____

LeForm 25AUG88

MCS - Calmac - 6-28-93

cool - foggy

4:55 - arrive on site, meet with -
Brian Krebs - Jerry Teen - mobile lab

7:00 - open NVP-4, Brian connecting
vacuum, no need for purge
volume test - performed twice
before (2 vols purged)
5, 12, 17, 25½, 36, 41 - leaks

7:05 - begin purging 8' (purge 100 mls)

7:10 - inject NVP4-1 (8')

Purge vol. - 50 mL / 8'
5.43 ml/foot - 2 vols per probe
40-50/ml per minute - purge rate - checked each time

7:34 collecting NVP4-2 (12')
purge 130.224 ml

7:36 injecting NVP4-2 (12')

7:45 downloading calibration data to
be able to print real-time, 1st
real time will be NVP4-3 (17')

7:55 purging ~~NVP4~~ NVP4-3 (17')
~~390.672 ml~~ mcs 184.5 ml

7:58 inject NVP4-3 (17')

8:10 connecting NVP4-4 (23.5')
first two runs complete
RCE peak on 2nd run

MCS Colman 6-28-93

TCE, PCE, [illegible] TC4 - peaked - 1st sample

5:20 purging NVP-4-4

5:26 collecting NVP-4-4 2 16.7 mL purged

5:26 inject NVP-4-4

5:36 purging NVP 4-5 390, 672 mL

8:45 collecting NVP4 5, injecting

8:55 purging NVP4-6 445 mL purged

~~8:55~~ 9:05 collect and inject NVP4-6

9:20 decide to re-run NVP4-1, NVP4 2 & NVP4-3 due to overlap in area of chromatogram. Goal to use lesser dilution

9:30 injecting NVP4-1

9:40 getting ready to re-sample NVP4-2 can cut run off after PCE peak to shorten time

9:50 purging NVP4-2

9:56 injecting NVP4 2

10:00 setting up on NVP4 3

10:10 channels crossing of, RAGCB arrives

10:15 inject NVP4-3

10:30 open NVP2 connect to NVP2-1 (41')

41, 11, 22½, 31, 36' - depths
1 2 3 4 5

MCS 22.5 Colman 6-28-93

10:40 purge 43 mL from NVP2-1 (41')

10:41 collect NVP2-1 (41')

10:42 inject NVP2-1 (41')

10:05 connecting to NVP2-2 (11')

11:10 purging NVP2 2 (856 mL)

11:12 collecting NVP2-2

11:35 connecting to NVP2-3 (22½')

purging (2410 mL) arrives checking

11:45 collect NVP2-3 leave 12:00

12:00 connecting to NVP2-4 (31')

12:05 purging (3364 mL)

12:10 injecting NVP2-4

12:30 purging NVP2-5

12:37 collect NVP2-5

12:38 inject NVP2-5

1:05 setting up on NVP1

4, 11, 18, 31, 39'
1 2 3 4 5

1:10 connecting to NVP1-1 (41')

purging 43 mL

1:14 collecting NVP1-1

1:15 inject NVP1-1

1:30 inject NVP1-2 pass 1:50

1:40 purging NVP1-3 setting up

2:00 purging NVP1-4

4/28/93 Coleman MCL	8'	12'	17'	25.5'	36'	41'
	NVP4-1	NVP4-2	NVP4-3	NVP4-4	NVP4-5	16
PCE	~200 µg/L (CA State MCL)	<~200 (MCL)	~200 µg/L	~410 µg/L	~24 µg/L	5.4
TCE	20 "	~16	~14	~7.6	—	—
1,1,1-TCA	20 "	16 (MCL)	~14	~13	—	—
PCE (EPA MCL)	1,100 µg/L	1,100 µg/L	1,100 µg/L			
Depth	4'	11'	22½'	31'	36'	
Well	NVP2-1	NVP2-2	NVP2-3	NVP2-4	NVP2-5	
PCE	75 µg/L	33	16	14	5.1	
TCE	20 "	26	27	26	—	
1,1-DCA	7 "	14	19	6.7	—	
1,1,1-TCA	57 "	65	69	60	—	
TCE	15 "	24	28	45	—	
~~1,1-DCE~~				~~20~~		
Depth	4'	11'	18'	31'	37'	
Well	NVP1-1	NVP1-2	NVP1-3	NVP1-4	NVP1-5	
1,1-DCE	2.8	3.8	5.9	—	3.7	
1,1-TCA	1.8	2.3	1.9	—	—	
PCE	4.3	5.6	5.6	1.6	1.6	
TCE	—	—	1.4	—	3.0	
Well	NVP3-1	NVP3-2	NVP3-3	NVP3-4	NVP3-5	

MCL - Coleman 4.28.93

2.[illegible] connect ~~NVP1-4~~ NVP1-4 (19')
2.11 inject NVP1-4
2.30 connecting to NVP1-5 (39')
2.35 purging
2.45 inject NVP1-5
3.10 setting up NVP3
3.15 purging NVP3-1 (8')
3.[illegible] inject NVP3-1
NOTE: NVP3 [illegible] near pitcher levels (1 qt)
3.40 purging NVP3-2 (12')
3.13 inject NVP3-2
3.55 connecting NVP3-3 (18')
3.52 purging NVP3-3
3.27 inject NVP3-3
4.30 purging NVP3-4 (25½')
4.15 inject NVP3-4
4.55 inject NVP3-5 (31½')
Note: 200 ml purged for NVP3-5 due to incoming water than volume (target 300 ml)

CALMAR 2455.01 5-13-93
SAF

Soil Gas Sampling

6:30 - Arrived on Site & met with Brian from Terra T.
7:00 - Began step volume test on LFSB-4 probe depths 1 & 5 (6 runs total)
Dave Field on site 8:00-9:00
- It was decided to run all probe tests @ 2 volumes
10:30 - Ran test probe # 2
10:00 - Ran test probe # 3
11:00 - RWQCB representatives arrive - Charles Chang & Hiam Tam
- Brian continued to run samples during RWQCB visit
→ Hiam Tam required Brian to rerun QC & Calibration again due to change in QC procedures
11:45 - Began rerunning QC & recalibration test
Brian also decided to run the blank at this time as well
1:00 - Ran test probe # 4
1:30 - Run test probe # 6

CHL Trip 2455 5-13-93

Unknown at this point if RWQCB will require rerun of probe tests LFSB4 2&3 since they were taken before new QC & calibration test run.
→ They are due to return at 4:00 PM

2:10 - Began work on LFSB-2
ran sample probe #1
2:40 - ran sample probe #2
3:10 - ran sample probe #3
3:45 - ran sample probe #4
4:15 - ran sample probe #5

4:40 - Began work on LFSB-1
ran sample probe #1
3:50 - Hiam Tam from RWQCB returned for lab control data - he wants us to run LFSB-4-2&3 again. He also said for next round(s) of tests it would not be necessary to run step volume tests up front but to check with Charles Chang to confirm.

5:00 - ran sample probe #2
5:20 - ran sample probe #3
5:50 - ran sample probe #4
6:15 - ran sample probe #5

6:35 - Resample of LFSB-4
- ran sample probe #2
6:55 - ran sample probe #3

7:15 - Began work on LFSB-3
7:40 - ran sample probe #1
8:00 - ran sample probe #2
8:15 - ran sample probe #3
8:35 - ran sample probe #4
8:55 - ran sample probe #5
*at end of purging LFSB-3-5 water was drawn up probe. Brian had already removed gas sample & shut off equipment

LEVINE•FRICKE

Daily Field Report

Project : CALMAIR Project No. 2455.09

Personnel Inspector: TWT Day: Friday Date: 4/23/93

Time On Site: From 8:15 To 2:10 ; From _____ To _____ Task No(s) : 03

Weather: clear / 80°

Description Of Task: water sampling MW-4, MW-5

Equipment In Use: LF: water sampling Subcontracts: —

Work Completed (Attached copy of field notes) : See Attached notes :

Special Conditions (Visitors, Corrective Work Required, etc.) :

Reviewed By:

1+form
25AUG88

CALMAIR LF. 2455 07

On site @ 8:15

- Set up to purge / sample wells MW-4, MW-5. Site - clear, Gauge wells, etc, calibrate instruments.

- Took equipment Blank before purging wells. Poured through pump screen. # EB-3

MW-4

DTW: 35.67

TD = 50.

14.33 feet, 9.31 Gallons per well casing volume. 5 volumes = 46.5 Gallons

- 3" pump used -
purge @ 10-15 GPM

9:52

pH = 6.64
cond = 1.28 clear
Temp = 20.8
Gallons 5

9:55

pH = 6.61
cond = 1.28 slightly
Temp = 20.8
Gallons = 10

9:57

pH = 6.73
cond = 1.30
Temp = 20.6
Gallons = 35

9:58

pH = 6.77
cond = 1.25 clearing
Temp = 20.7
Gallons = 45

9:59

pH = 7.00
cond = 1.26 clear / stop
Temp = 21.0
Gallons = 50

@ 12:15 - 7.60 liters

Sample @ 1:30 Took Turbidity sample for Lab

Turbidity = 9.34

MW-5

TD = 50.0

DTW = 33.91

16.09 feet, 10.45 = 1 casing volume

5 Volumes = 52.25

3" pump @ 10.5 GPM

10:20

Temp = 20.1

pH = 6.84

cond = 1.37 clear

Gallons = 5

10:21

Temp = 20.8

pH = 6.91

cond = 1.59

Gallons = 15

10:22

Temp = 21.0

pH = 6.86

cond = 1.63

Gallons = 30

10:23

Temp = 20.3

pH = 6.92

cond = 1.62 clear

Gallons = 40

10:24

pH = 6.80

cond = 1.67

Temp = 21.3 clear / stop

Gallons = 55

pH

Cond

Temp

Gallons

@ 12:30 Turbidity = 26.8 NTUs

Sample @ 1:55

Turbidity = 16.99 NTUs

Notes:

11:45 - RIDGCIB - person
Have to repeat H_2O sampling
Left @ 12:00.

- 11:45 cleanup, work on maps
from Upper wells.

- 12:00 sample wells MW-1, MW-5

- Turbidity meter calibrated @
0.02 NTU's. Meter was
Fluctuating During calibration.

- Took Duplicate @
MW-5 = # MW 50

- Took Turbidity sample @
MW-4, for Lab.

off site to Lab @ 2:10.

LEVINE•FRICKE

Daily Field Report

Project : CALMAR Project No. 2455.09

Personnel Inspector: TWT Day: Friday Date: 4/16/93

Time On Site: From 7:25 To 2:55 ; From _____ To _____ Task No(s) : 03

Weather: clear 80°

Description Of Task: water sample monitoring wells - 8

Equipment In Use: LF: water sampling Subcontracts: —

Work Completed (Attached copy of field notes) : See Attached notes.

Special Conditions (Visitors, Corrective Work Required, etc.) :

Reviewed By:

L-Forms
25A/G48

CALMAR 2355.09
4/16/93
Water sample

on site @ 7:25
set up to begin sampling, calibration
Begin sampling @ 7:50

MW-1
DTW = 37.01
TD = 57.0
19.99 feet / casing volume = 12.99
3 volumes = 38.97 gallons

7:52
pH = 6.85
Cond = 1.91 slightly
Temp = 19.0
Gallons = 2

pump @ 10-12 GPM
bail casing
3" pump

7:54
pH = 6.89
Cond = 1.91 clear
Temp = 20.9
Gallons = 15

7:55
pH = 6.94
Cond = 1.89
Temp = 20.8
Gallons = 30

7:56
pH = 6.95
Cond = 1.81
Temp = 20.7
Gallons = 45

7:57
pH = 6.90
Cond = 1.90
Temp = 21.0
Gallons = 50

Stop
clear

---

sample @ 9:20 — sample DISCARDED
turbidity = 13.48 @ 9:20

sample @ 11:35
turbidity = 8.67 NTUs

MW-4

DTW : 35.85

TD : 50

feet = 14.15 | casing : 9.19

5 Volumes = 45.98

10:02

Temp 18.2

Cond 1.83

pH 7.09

Gallons 2

clear

- pump @ 2-5 GPM
- 2" pump used out
- [redacted] good recovery
- 3" pump - 10 GPM

10:04

Temp 20.8

Cond 1.82 sl. murky

pH 7.10

Gallons 15

pump off - ~~[redacted]~~ / ~~[redacted]~~ pump quit

new pump - start @ 10:25

10:27

Temp 20.8

Cond 1.84

pH 7.05

Gallons 25

10:28

Cond = 1.81

pH = 7.05

Temp = 20.7

~~Gallons = 1~~

~~Cond = 35~~

Gallons = 35

sl. murky

10:29

pH = ~~[illegible]~~ 7.08

Cond = 1.84

Temp = 20.0

Gallons = 45

10:31

pH = 7.09

Cond = 1.84

Temp = 20.7

Gallons = 60

murky

10:33

pH = 7.09

Cond = 1.82

Temp = 20.7

Gallons = 75

sample @ 12:15

Turbidity : 26.50

stop /

sl. cloudy

@ 12:30

Turbidity = 29.8 ntus

MW-5

TP = 50

DTW = 34.09

15.91 feet, 1 casing volume = 10.34

5 casing volumes = 51.70

11:01

pH = 6.92

Temp = 21.8

Cond = 2.11 cloudy

Gallons = 5

pump @ 10-15 GPM

3" pump used

11:03

pH = 7.00

Cond = 2.03

Temp = 21.9 clearing

Gallons = 15

pH = 6.98

Cond = 2.01 clear

Temp = 21.9

Gallons = 25

11:05

pH = 6.98

Cond = 2.03

Temp = 21.8

Gallons = 35

11:06

pH = 6.99

Cond = 2.03

Temp = 21.8

Gallons = 45

11:08

pH = 6.97

Cond = ~~1.99~~ 2.00 STOP

Temp = 21.7 clear

Gallons = 60

sample @ 2:40 / collected turbidity sample for LAB.

turbidity = 25.87 NTUs

@ 11:45 turbidity = 27.8 NTUs

@ 1:45 turbidity = 16.5 NTUs

P-1

PTW = 34.94

TD = 52

7.06 feet, casing volume = 11.08

5 casing volumes = 55.44

8:18

pH = 7.23

Cond = .58 monitoring

Temp = 20.8

Gallons = 2

- pump @ 2-5 GPM
- 2" pump
- slow recovery

8:20

pH = 7.13

Cond = .66

Temp = 21.0

Gallons = 15

8:22

pH = 7.07

Cond = 0.88 cleaning

Temp = 20.8

Gallons = 25

8:24

pH = 7.02

Cond = 0.96

Temp = 22.0 water clearing

Gallons = 35

8:30

pH = 7.07

Cond = 1.01

Temp = 22.7

Gallons = 45

8:35

pH = 7.00

Cond = .97

Temp = 21.1 stop

Gallons = 55 clear

sample @ 8:31

Turbidity = 4.97 NTUs

Duplicate = P-10

Notes:

- Surveyors on site @ 7:30 to survey existing and new wells, also well tie in Bldg. and Fence corners.

- Took Equipment Blank @ 9:00 After wells MW-1, P-1. Poured water over pump - collected water. (# LFEB-2)

- Took Duplicate on well P-1, (# P-10) @ 9:30

- Took Turbidity, for Lab / Field QAQC check from well MW-1 @ 9:20 Turbidity = 13.48 NTU's
- Turbidity calibrated @ 5.0 NTU's.
- MW-5 Took Turbidity sample for Lab QAQC - 15.87 @ 2:30.

off site to lab @ 2:55

LEVINE•FRICKE

Daily Field Report

Project : CALMAR Project No. 2455.09

Personnel Inspector: TWT Day: Thursday Date: 4/15/93

Time On Site: From 7:30 To 3:50 ; From _____ To _____ Task No(s) : 03

Weather: clear 75°

Description Of Task: water sample monitoring wells - 8

Equipment In Use: LF: water sampling Subcontracts: ~~0~~

Work Completed (Attached copy of field notes) : See Attached notes:

Special Conditions (Visitors, Corrective Work Required, etc.) :

Reviewed By:

LF Form 25AUG88

CAMAR 2455.09

4/5/93

on site @ 7:30

start clean equip, set up, calibrate to sample monitoring wells

setup on MW-1, 8:13 AM

DTW = 37.01 19.59 17

TD = 57.0 1 casing vol = 12.99

5 volumes = 64.96 gallons

pump @ 10.12 GPM
using 3" pump
- good recovery

PH cond 8:31

cond = 1.94

PH = 6.75 murky

Temp = 20.8

Color = ~ 2

8:33

cond = 1.96

PH = 6.81 clear

Temp = 20.4

Color = ≈ 15

MW-1 continued

8:35

pH = 6.88

Cond = 2.03

Temp = 20.1

Gallons = 30

* slight sheen

8:37

pH = 6.93

Cond = 1.93

Gallons = 45

Temp = 19.9

8:38

pH = 6.92

Cond = 1.96

Gallons = 60

Temp = 20.2

8:39

pH = 6.95

Cond = 1.94

Temp = 20.2

Gallons = 70

stop pump

clear

good recovery

AT 11:20 24.4 NTU's

sample @

Turbidity = NTU's

no sample taken post holding time.

MW-3 9:30

DTW = 35.52

TP = 43.5

7.58 Ft 1 casing volume = 4.92 Gallons

5 volumes = 24.63

9:39

Temp = 21.7

Cond = 1.07

pH = 6.86

Gallons = 2

START using 2" pump

clear

clear - purge ~~[illegible]~~ 4 BGPM

- Medium recovery

9:41

Temp = 22.2

Cond = 1.18

pH = 6.97

Gallons = 10

sl. murky

9:45

Temp = 22.5

Cond = 1.43

Gallons = 15

pH = ~~15~~ 6.98

sl. murky

MW-3 continued

9:46

cond = 1.58

Temp = 22.5

pH = 6.99 Slight brown sediment

Gallons = 20

9:48

cond = 1.60

Temp = 22.7

pH = 6.99

Gallons = 25

9:49

cond = 1.62

Temp = 22.6 Stop pumping

pH = 6.99 clear

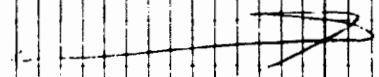
Gallons = 30

Sample @ 2:00 p.m. 4 vocs

Turbidity = 1.2 ntus

Test Equipment Blank after well MW-3

10:15 - poured over bailer & pump



MW-2

PTW: 36.10
TD = 48
11.9 ft.T 1 casing volume = 7.73
5 volumes = 38.67

10:17
pH = 7.06
Cond = 2.87 START
Temp = 22.5 murky
Gallons = 2

- pump @ 10 GPM
- 3" pump
- sheen
- ~~Good recovery~~

10:20
pH = 7.10
Cond = 2.17 Sl. murky
Temp = 22.6
Gallons = 10.

10:23
pH = 7.11
Cond = 2.39
Temp = 22.7
Gallons = 15

MW-2 continued

pH = 7.09
Cond = 2.45
Temp = 22.7
Gallons = 20

10:23
pH = 7.08
Cond = 2.50
Temp = 22.7 clearing
Gallons = 25

10:26
pH = 7.07
Cond = 2.47 clearing
Temp = 22.6
Gallons = 35

10:30
pH = 7.06 STOP
Cond = 2.45 clear
Temp = 22.6
Gallons = 40

Sample @ 2:30
Turbidity = 1.3 NTUs

P-2

PTC = 36.38

TD = 56

18.42 feet casing volume = 12.62

5 casing volumes = 63.11

11:45

pH = 7.14

Cond = 187 } start

Temp = 21.8 } clear

Gallons = 3 slight sheen

- purge @ 12 GPM
- 3" purge
- back recovery

11:47

pH = 7.10

Cond = 2.08

Temp = 21.9

Gallons = 15

11:48

pH = 7.07

Cond = 2.12

Temp = 21.9

Gallons = 30

P-2 continued:

11:49

pH = 7.05

Cond = 2.11

Temp = 21.9 Clear

Gallons = 40

11:50

pH = 7.03

Cond = 2.17 Clear

Temp = 22.0

Gallons = 50

11:52

pH = 7.00

Cond = 2.21

Temp = 22.0

Gallons = 60

11:53

pH = 6.99

Cond = 2.13

Temp = 22.1

Gal = 70

sample @ 2:48

Turbidity = 4.7 NTUs

P-3

DTW = 35.12
TD 58
22.88 feet casing volume = 14.27
5 volumes = 74.36

12:32 START
pH = 7.01
Cond = 2.18
Temp = 22.8
Gallons = 2

pump @ 5-8 GPM
2" pump START
pump recovery

12:34
pH = 7.14
Cond = 1.88 clear
Temp = 22.6
Gallons = 15

12:45
pH = 7.00
Cond = 2.34
Temp = 20.4 clear
Gallons = 30

stop pump / recovery
12:41 start @ low
flow rate = approx 1-2 GPM

P-3 cont:
pH = 6.98
Cond = 2.30
Temp = 23.7 clear
Gallons = 45

1:35 pump @ 1:15
pH = 6.95 1:4 - p.y
Cond = 2.44
Temp = 24.5 clear
Gallons = 55 start @ 1:30

2:11
pH = 6.92
Cond = 2.30 clear
Temp = 24.0
Gallons = 70

2:25
pH = 6.91
Cond = 2.29
Temp = 23.1 STOP
Gallons = 75

stop pump
recovery
12:48

stop pump/recovery
1:08

stop pump/recovery
1:23

stop pump
1:36

start 1:45

stop pump
1:49

start 2:00

stop pump
2:04

sample @ 3:35 duplicate p-30

Turbidity = 4.8 NTU

Notes:

3:00

Cannot sample MW-1 Waiting time of 4 Hrs was exceeded. Will purge and sample tomorrow.

3:05 Begin clean up of Equipment, Empty Drums

3:35 - Took Duplicate sample on P 3 (# P-30)

3:50 - off site to LAB.

ROUTE	
DEF	✓
FILE	

LEVINE•FRICKE

Daily Field Report

Project : CAMAR Project No. 2455.09

Personnel Inspector: R.B. DIRLINIS III Day: THUR Date: 4-15-93

Time On Site: From 10:00AM To 10:16AM; From _____ To _____ Task No(s) : 11

Weather: CLEAR WITH HIGH CLOUDS

Description Of Task: DELIVERY

Equipment In Use: LF: TRUCK Subcontracts: N/A

Work Completed (Attached copy of field notes) : TOM CALLED ME AT FIELD OFFICE AND SAID HE NEEDED AC ADAPTOR PLUG FOR [illegible] WHICH I DELIVERED TO TOM & STEVE; CHECKED OUT THE SITE AND THEN [illegible] TRAFFIC JAM ON 57 FROM [illegible] AND MILS.

Special Conditions (Visitors, Corrective Work Required, etc.) : _____

Reviewed By: _____

L-Forms 26AUG88

•LEVINE•FRICKE

Daily Field Report

Project : 2455.07 ~~[illegible]~~ Project No. CALMAR

Personnel Inspector: Don Clay Day: Wed Date: 4-14

Time On Site: From 7:00 am To 8:30 pm ; From _____ To _____ Task No(s) : 10

Weather: Warm (cool in early morning + evening)

Description Of Task: Sampling vapor probes

Equipment In Use: LF: Supercab Subcontracts: Terra Tech Labs Mobilelab Brian Kato

Nested Vapor Probes: "NVP"
LFSB1 = NVP1 ; LFSB2 = NVP2 ; LFSB3 = NVP3 ; LFSB4 = NVP4

Work Completed (Attached copy of field notes) : Brian arrived late (7:15) + apparently had ~~stopped~~ quickly in traffic which loosened a ~~[illegible]~~ wire in his equipment. It took untill almost 8:30 to make sure his equipment was working properly. Sampling began with the shallowest probe near the clarifier but it came up non-detect for all analytes for 1, 2 + 3 purge volumes. Brian was able to get verbal results from his office (TerraTech) as to the analyte concentrations in the soil samples that had been run. LFSB4 had the highest levels, thus we moved our procedure to that location + performed purge tests @ two intervals (a clay + a silt). A second test was also performed on a sand unit to see how it reacted to purge volumes. Generally: for Clay 1 or 2 volumes is good, for silt only 1 volume appears to be good, and for sands 1 or 2 volumes is good. The deepest probe in NVP4 (NVP4.6) may have contained water, as the flow rate was very low.

Special Conditions (Visitors, Corrective Work Required, etc.) : (but not 3)

Reviewed By:

California 25AUG88

LEVINE•FRICKE

Daily Field Report

Project: Calmar Project No. 2455

Personnel Inspector: DSF Day: Monday Date: 4-5-93

Time On Site: From 7:00 To 12:30; From _____ To _____ Task No(s): 2

Weather: Cloudy + cool

Description Of Task: Drilling / installing MW-5

Equipment In Use: LF: Supercab
FID, Solonist

Subcontracts: Gregg Drilling (Dirk, Jesse + Mike)
Drill Rig, grout truck, chase truck, traffic cones + signs, tractor

Work Completed (Attached copy of field notes): Set up traffic control (25 cones + "right lane closed ahead" + men working signs). Drilled to 55' (sampled from 50 to 51½) + ran a seive analasis. #3 sand would be "ok" for this well but opted for the 2/12 (bags) in the event that there may be finer soils not sampled. No perched water found. Since the wind 320 was used, the bags of bentonite chips + environ grout was used. The drillers departed @ ~1:00. MW-3 was gauged; it's TD is ~42½ and water was @ ~36½ (7 feet of water)

Special Conditions (Visitors, Corrective Work Required, etc.): Went to City Hall after work completed

Reviewed By: Donald J. Ely

LF-FORM 2 25AUG88

LEVINE•FRICKE

Daily Field Report

Project: Calmar Project No. 2455.07

Personnel Inspector: Don Eley (IKG) Day: Sat Date: 4-3-93

Time On Site: From 7:00 To 6:00 ; From _____ To _____ Task No(s): 4

Weather: warm / mild

Description Of Task: drilling LFSB1 & LFSB2, installation of vapor probes

Equipment In Use: LF: Supercab Subcontracts: Gregg Drilling

FID / Solonist two simco rigs

Work Completed (Attached copy of field notes): The drillers were ~20 min late & the second crew/drill rig was more than an hour late. Cored holes, started drilling LFSB1 by clarifier, I logged & sampled soil from this boring, Ian Goltz logged & sampled soil from LFSB2. No ground water was encountered in LFSB1 (Solonist sounder used & samples not saturated) but some was encountered in LFSB2. The drillers ran out of ~~sand~~ bentonite for placing the vapor probes, LFSB2 was completed (vapor probes placed) with materials on hand, while more bentonite was brought to the site to complete LFSB1. There also was not enough teflon tubing to place 6 probes in each of the nested vapor wells (Supplier closed on Saturday), so only 5 probes were placed in each cluster. Ian departed for home & I took the soil samples to Terra Tech Labs which was open...

Special Conditions (Visitors, Corrective Work Required, etc.):

Reviewed By: Don Eley

L-Forms 26AUG88

LEVINE•FRICKE

Daily Field Report

Project: Calmar Project No. 2455.08

Personnel Inspector: DSEley Day: Friday Date: 4-2-93

Time On Site: From 7:00 To 2:20 ; From _____ To _____ Task No(s): 2

Weather: warm + clear

Description Of Task: Installation of MW-4

Equipment In Use: LF: Supercab Subcontracts: Gregg Drilling

Solomist, FID, gram scale, sieves, stove

Work Completed (Attached copy of field notes): MW-4 drilled/sampled/Installed, located @ South edge of parking lot. Sand pack surged + portion above G-W was wetted w/ distilled water. Dry Seive analysis run on the finest grained material (from 50' sample). Used #2/12 sand + 02 slot (stainless) casing.

Special Conditions (Visitors, Corrective Work Required, etc.): _____

Reviewed By: Donald S Eley

LEVINE•FRICKE

Daily Field Report

Project: Calmar Project No. 2455

Personnel Inspector: Don Eley Day: Thurs Date: 4-1-93

Time On Site: From 7:00 To 4:30 ; From _____ To _____ Task No(s): 4

Weather: Clear in Am, overcast most of the day

Description Of Task: Redrilled LFSB-4, drilled LFSB-3, placed vapor probes

Equipment In Use: LF: SuperCab Subcontracts: Gregg Drilling

Fid, Solonist

Work Completed (Attached copy of field notes): A second boring was drilled ~3 feet S-gm yesterdays LFSB-4. Vapor probes were installed. The teflon was measured out on plastic sheeting, bundled together + placed in the boring (Chuck Chang (?) stopped by ~~before~~ but did not see installation of LFSB-4). LFSB-3 was drilled, with samples driven every 2½ feet. This set of nested probes was built by setting each probe individually (the tension release as the points were placed on sandpack could be felt) by placing 1st half of sand pack, placing the probe + pouring 2nd half of sandpack, placing bentonite seal + then repeating for the next point. Because of G-W depth only 5 points placed in LFSB-3 (6 were placed in LFSB-4, the deepest of which is under water?). Note: end of drillers tape measurer was lost at ~13' in LFSB-4 ... had duct-tape on it?)

Special Conditions (Visitors, Corrective Work Required, etc.): John of Gregg Drilling visited

Reviewed By: _____

Uniform 26AUG89

LEVINE•FRICKE

Daily Field Report

Project: Calmar Project No. 2455

Personnel Inspector: DEE Day: Wed Date: 3·31·93

Time On Site: From 7:00 To 6:00 ; From _____ To _____ Task No(s): 4

Weather: Cool in Am, warm balance of day

Description Of Task: drilling/sampling LFSB-4, utility locating

Equipment In Use: LF: Super-cab Subcontracts: Gregg Drilling

FID, Solonist Drill Rig

Chase truck

(Goldack & Dan) Tractor

Work Completed (Attached copy of field notes): Hand augured to 5', sampled w/ splitspoon (5 to 6½'), then continuous core to 10'. Followed the pattern untill poor return, then just used split spoon only. Charels Clang (?) of RWQCB requested that vapor probes be placed just above coarse grained/clay interfaces. Indicated that probes should be placed @ depth (below an encountered perched H.C zone) as the water may be present seasonally/transient. He requested that several soil samples be analized, + bond preference in the ice cheat rather than the ice. The boring was backfilled w/bentonite. I explained that MW-3 now has 1'6' of water... it would be a mess to deepen. He "nodded" when I said we would not deepen it. Gas company checked lines in street as did H.C. Company cable company.

Special Conditions (Visitors, Corrective Work Required, etc.):

Reviewed By: [signature]

LF-Form 2500C8

APPENDIX E

RWQCB Deliverables; Laboratory Case Narratives
(Available on Request)