

PROPERTY TRANSACTION ASSESSMENT  
AND INITIAL SITE CHARACTERIZATION  
AT 1630 - 162ND AVENUE  
SAN LEANDRO, CALIFORNIA

KAUFMAN & BROAD  
SEPTEMBER 28, 1989

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September 28, 1989

Mr. Mike Forsum  
Kaufman & Broad  
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Fremont, California 94538

Dear Mr. Forsum:

**PROPERTY TRANSACTION ASSESSMENT AND INITIAL SITE CHARACTERIZATION AT  
1630 - 162nd AVENUE, SAN LEANDRO, CALIFORNIA**

**EXECUTIVE SUMMARY**

**Phase I**

A Phase I environmental assessment of the property at 1630 - 162nd Avenue in San Leandro, California, a commercial plant nursery, was conducted to provide a preliminary indication for potential environmental impacts to the subject property resulting from chemical use, handling, storage, or disposal at the site. Work consisted of an inspection of the subject property, an inspection of neighboring properties, and a review of agency records for the subject property and neighboring properties. Various houses and shed type buildings were located across the 4.5 acre site, in addition to a large number of greenhouses and growing areas. Two gasoline tanks, both twenty years old or older, were identified on-site. At least one tank had leaked in the past and had been replaced. Based on the age and history of the gasoline tanks and the potential for the presence of pesticides, herbicides, and ethylene bromide in soil, a Phase II investigation was recommended to determine if elevated levels of chemicals were present on-site.

**Phase II**

Phase II soil and groundwater sampling were conducted on August 15, 1989. Five grab surface soil samples were collected and analyzed for volatile halogenated organic compounds, chlorinated herbicides, and chlorinated

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pesticides. Four soil borings were drilled in the vicinity of two underground gasoline tanks and analyzed for gasoline (total volatile hydrocarbons) and benzene, toluene, ethylbenzene, and xylene's. Grab groundwater samples were collected and analyzed for gasoline (TVH)/BTEX, chlorinated pesticides, and volatile organic compounds.

Soil analytical results from the grab samples (GS-1 through GS-5) indicate that herbicide and pesticide compounds are present in shallow soil at the site in low (barely detectable) levels, well below any regulatory action levels.

Soil analytical results from the soil borings (SB1-SB4) indicate that the northern underground tank has leaked and that soil total volatile hydrocarbon contamination exceeds regulatory action levels. Soil samples collected from adjacent to the southern underground tank did not indicate that leakage from the tank had occurred.

Groundwater analytical results from on-site well grab samples indicate that no VOC, TVH/BTEX, or chlorinated pesticide compounds were present in those wells sampled.

### Phase III

Phase III soil and groundwater sampling was conducted on August 31, 1989. Two soil borings were drilled in the vicinity of the northern underground gasoline tank. SB-5 was drilled slightly upgradient of the tank and SB-6 was drilled approximately 30 feet in the presumed downgradient direction. Soil analytical results from samples collected in SB-5 and SB-6 did not indicate TVH/BTEX contamination. Grab water samples collected through the borehole did indicate that TVH/BTEX compounds are present in (perched) groundwater beneath the site.

## PHASE I PROPERTY TRANSACTION ASSESSMENT

### Introduction

A Phase I environmental assessment of the property at 1630 - 162nd Avenue, San Leandro, California was conducted at your request. Work consisted of an inspection of the subject property, an inspection of neighboring properties, and a review of agency records for the subject property and neighboring properties.



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The objective of the property inspection was to provide a visual assessment of all elements of the site which could potentially result in environmental impacts and to look for physical evidence of potential contamination. Work associated with the property inspection included:

- An on-site inspection of the property;
- Identification and inspection of adjacent and nearby properties; and
- A review of historical aerial photographs of the property.

The objective of the agency record search was to obtain available information on the subject property. Agency records give an indication of the environmental status of the property and surrounding properties in the vicinity of the site.

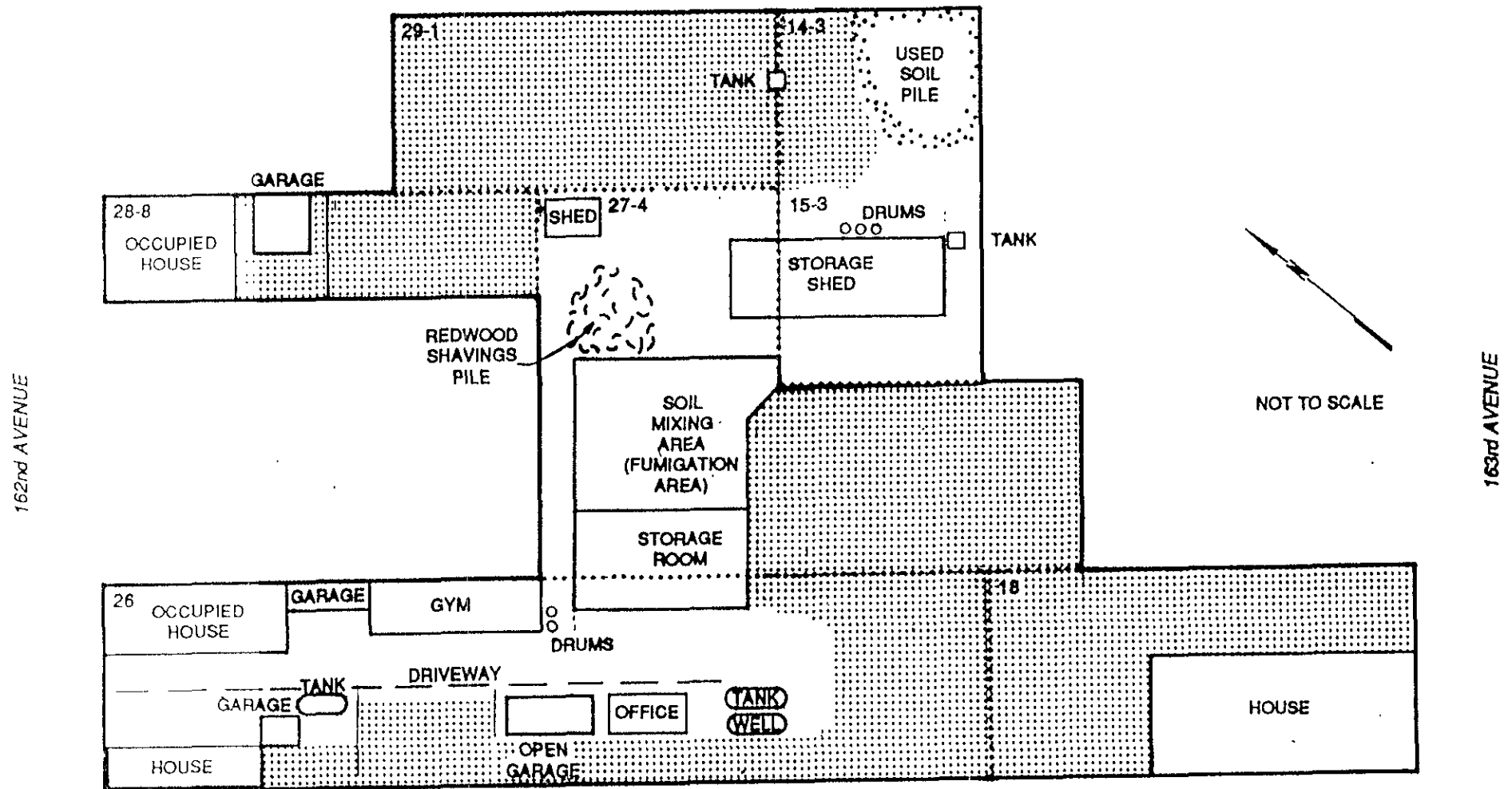
#### Property Description

The subject property consists of an approximately 4.5 acre parcel primarily used for a plant nursery and residential homes. The subject property is bordered by 162nd Avenue on the north, 163rd Avenue on the south, and is located a few blocks west of Highway 580. An apartment complex and single family residential homes border the site immediately to the east and west. A site plan of the property is shown in Figure 1. The property consists of seven legal parcels.



Inquires to the Alameda County Assessor's Office revealed the site is currently owned by Hiroshi and Diane Fukushima. Mr. and Mrs. Fukushima have owned the property since 1974 and has used the land for a nursery. George and Mary Muramatsu were the previous owners of six parcels on the subject property and had also operated a nursery. Deed records could not be readily retrieved easily to determine the length of time the Muramatsu's owned the subject property because the transaction occurred before 1969. Alameda County deed records prior to 1969 are organized by date of transaction, not alphabetically. The seventh parcel was sold in 1979 to Mr. and Mrs. Fukushima by John and Herbert Vargas for the deceased owner, Evelyn V. Perry.



FIGURE 1  
SITE PLAN  
1630 - 162nd AVENUE



LEGEND

-  GREEN HOUSE OR OUTDOOR NURSERY
- 29-1 PARCEL NUMBER
-  PARCEL BOUNDARIES



### Property Inspection

The subject property was visually inspected on August 1, 1989. McLaren personnel were escorted through the site by Mr. Hiro Fukushima. The property and surrounding areas were inspected for evidence of chemical use and storage, and for current and past disposal practices. This involved walking around the site and inspecting the property for the presence of debris, stains, liquid-cooled transformers, tanks, fill pipes, hydraulic equipment, and maintenance areas.

The property consists of an open nursery, several green houses, storage areas, and five homes. Three of the homes are occupied by tenants, two other homes are used for storage of nursery equipment, products, and Ms. Fukushima's personal belongings, and one home has been converted to a gymnasium for the Fukushima employees. The interior of the homes were not inspected by McLaren personnel, but Mr. Fukushima was willing to discuss the items stored inside each of the homes. The two homes used for storage have been unoccupied for approximately 10 years. All structures were constructed prior to 1979 indicating that asbestos containing building materials (ACBM) may be present on-site.

There are three garages on the property which house antique cars and miscellaneous auto repair supplies. In front of one of the garages, closest to the 162nd driveway, is an unleaded gasoline pump which services a ~~550 gallon underground storage tank (northern tank)~~. This tank was installed in the 1970's and is still in use, but the integrity of the tank is unknown.

A second underground storage tank (southern tank) is located adjacent to the small nursery office on the west side of the property. Over 20 years ago, this leaded gasoline pump serviced a 1,000 gallon underground storage tank, until the tank was discovered to have been leaking and accumulating groundwater. This subsurface tank was removed and replaced with a 550 gallon underground tank that is still present but not in use at the time of the site inspection. Mr. Fukushima recalled that the original tank was emptied at the time of decommission.

In subsequent interviews with Mr. Hiroshi, he stated the northern tank may have leaked 20 years ago and had been replaced at that time. It is unclear if both tanks have leaked and been replaced or if only the southern tank has leaked in the past.



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Adjacent to the southern gasoline pump is a 55-gallon drum used to store waste oils from the automobiles and trucks used for the nursery. Historically, Mr. Fukushima delivered the waste oils to a nearby gasoline station, but currently a waste recycler picks up the oil. Minor oil stains were observed adjacent to the 55-gallon drum.

An active domestic groundwater well is located adjacent to the southern gasoline pump. The well water is used to water the plants, but does not service the homes on the property. The well water is mainly used during the drought years, in particular, over the past few years. The depth of this well is approximately 60 feet deep and it is believed to be an open ended standpipe type well. Two other open ended wells are located on the site, however, both are currently not in use. \*

The major storage shed in the center of the property contains two antique cars, a variety of plant/flower pre-printed name labels, and many sacks and cans of plant supplies. No attempt was made to list names of supplies in this room as they are too numerous. This room has a concrete floor with no visible floor drains.

In the western portion of the property, several piles of either used soil, redwood shavings, and/or fertilizer were stored. The mixing of plant soil occurs in an adjacent open shed area where a conveyor belt carries empty plastic plant trays through a soil unloader which fills the trays with new soil. Then the trays containing new soil are fumigated with methyl bromide for 2 days before the trays are used for planting. A small storage cabinet in the open shed area is used to store the methyl bromide tank. Mr. Fukushima presented an air permit from the County Agricultural Department for the application of methyl bromide for soil fumigation.

The remaining areas of the property have indoor (green house) and outdoor areas where plants/flowers are grown in containers. Plastic trays for plants are placed on wooden support racks approximately 2 feet off the ground. No plants are grown in the ground. The dirt floors under the aisles of plants allow the irrigation water to drain easily into the ground. Some of the aisles between the plants have concrete or wooden walk paths.

Ms. Fukushima recalled the use of the following pesticides: malathion, Isotox, diazinon, methyl bromide, and Avid. Malathion and Isotox were no longer applied as of approximately 15 years ago, but diazinon, methyl bromide, and Avid are all still currently being used. He did not recall



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using DDT on the property and was not aware of the previous owner's pesticide usage.

#### **Surrounding Areas and Aerial Photographs**

The surrounding neighborhood consists of residential homes, apartments, a school, and a church. The closest light industrial areas to the subject property are approximately 3 blocks west to East 14th Street and 2.5 miles east across Highway 580. There are two gasoline stations, a Shell and a Chevron gasoline station, both east of Highway 580 on Foothill Boulevard.

Aerial photographs from the years 1957, 1959, 1968, 1969, 1977, 1985, and 1988 were reviewed. According to these photographs, the green houses on the property were present on-site since the 1957 photo. Throughout the photos, the greenhouses can be observed, suggesting that the previous owner also used the property as a nursery. In 1977, the soil mixing area appears to be uncovered and the open barn currently on-site did not exist at that time. Between the 1973 and 1979 photographs, the greenhouses on the east end of the property were built. In the 1959 photo, the south end of the property had a house that was later demolished to provide more space for the nursery operations.

#### **Agency Record Search and Interviews**

To determine if agency records indicate occurrences of chemical contamination, pertinent agencies and individuals were contacted and interviewed and records reviewed. The results of this review are described below. McLaren personnel reviewed the following lists for information on potential environmental impacts of nearby sites on the subject property:

- . California Department of Health Services (DHS): Abandoned Sites Program Information System (ASPIS) of March 1988.
- . Regional Water Quality Control Board (RWQCB): Fuel Leaks List, Alameda County, August 1989.
- . Regional Water Quality Control Board: North Bay Toxics List, December 1988.
- . DHS: Expenditure Plan Sites (Superfund List) of January 1989.





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- EPA Comprehensive Environmental Response, Compensation, and Liability Information Systems (CERCLIS) List, June 1989.
- California Waste Management Board: "Solid Waste Information System (SWIS)" of April 1989.
- Governor's Office of Planning and Research: Hazardous Waste and Substance Sites List, pursuant to AB 3750 (Cortese) of March 1988.
- Regional Water Quality Control Board: Toxic Pits Cleanup Act List of June 1989.

Information on the subject property and nearby properties was also requested from Pacific Gas and Electric Company, the Bay Area Air Quality Management District (BAAQMD), Regional Water Quality Control Board, Oro Loma Sanitary District, and Alameda County Public Works.

#### ASPIS List

The ASPIS list indicated no sites which are a potential hazardous waste site within a three mile radius of the subject property.

#### RWQCB Fuel Leak List

The Regional Water Quality Control Board (RWQCB) Fuel Leak List indicates one site with leaking underground fuel storage tanks within a one mile radius of the subject property. A Chevron gasoline station located at 16304 Foothill Boulevard was on the list.

The file on the Chevron station was reviewed at the RWQCB office. Several fuel leaks were reported to the RWQCB; two in 1986, one in 1987, and one in April of 1989. Leaks were discovered in all cases during periodic inventory procedures. The extent of the ensuing investigations were minor and did not involve soil remediation. The status of the latest fuel leak is unknown, however, RWQCB is anticipating an inventory loss report will be submitted by Chevron. The Chevron site is located approximately .25 miles northeast (up and cross gradient) of the nursery site.



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RWQCB Toxics List

According to the RWQCB North Bay Site Management List there are no facilities with known toxic chemical spills or leaks within three miles of the subject property.

RWQCB Toxic Pit Cleanup Act List

The RWQCB Potential Toxic Pit Cleanup Act List indicated that there are no potential sites within a three mile radius of the property.

DHS Expenditure Plan

According to the California Department of Health Services (DHS) Expenditure Plan List (Superfund) for 1989 there are no current state Superfund sites within a three mile radius of the subject property.

CERLIS List

The Comprehensive Environmental Response Compensation and Liability Information System (CERLIS) list does not list any sites within a three mile radius of the subject site.

SWIS List

The California Waste Management Board's SWIS list indicates that there are no landfill facilities permitted to receive hazardous or non-hazardous solid wastes within a three mile radius of the subject property.

Hazardous Waste and Substance Site List

The Hazardous Waste and Substance Site List (Cortese) lists indicates that there are no facilities with known or suspected hazardous waste sites within three miles of the subject property.

Pacific Gas and Electric

Ms. Sue Fabbri, General Foreman for Pacific Gas and Electric Company in the Hayward Office, indicated that there should be no polychlorinated biphenyl (PCB) containing transformers in this area, as they are all relatively new. In addition, PG&E has been actively decommissioning or



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treating PCB transformers to reduce the residual oil below the 50 ppm threshold set by TSCA, the Toxic Substances Control Act.

#### Bay Area Air Quality Management District

Mr. Scott Owens searched the BAAQMD database for permits and citations issued to businesses in the general vicinity of the property. His search showed that an Industrial Plant Air Emissions Permit was issued to Mike's Custom Autobody and Milton Gassoumis Autobody, both located on 167th Avenue, approximately 0.5 miles southeast of the subject site. These companies were cited in 1983 for not having a permit.

#### Oro Loma Sanitary District

Inquiries were made regarding businesses at the subject property and neighboring sites. Mr. Ed Huer of the Oro Loma District stated that no wastewater discharge permits have been issued within a one mile radius of the subject property.

#### Alameda County Public Works

An inquiry was made to the Alameda County Public Works regarding the groundwater flow direction in the area. Mr. Scott Wiley stated that the upper aquifer flows in a west southwesterly direction and the deep aquifer flows south southwest. Sam Harrisburg of the Alameda County Public Works stated that there are three monitoring wells located at 2481 Washington Avenue which is in the vicinity of the subject property. Two wells are 25 feet south of San Leandro Boulevard and one well is 25 feet east of the railroad tracks. The three wells measured an averaged groundwater depth of 29 feet on November 25, 1987.

#### **Phase I Conclusions**

Observations and conclusions regarding this property include:

1. Due to the duration of the nursery operation at the site and the existence of underground tanks, it is difficult to determine the extent of potential soil contamination at the subject property without performing surface soil sampling and analysis.
2. The Chevron gasoline station located at 16304 Foothill Boulevard which is within 2.5 miles northeast of the site may have impacted the



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groundwater in the vicinity of the subject property, since the subject site is located generally downgradient from the station. Files at RWQCB indicate past leaks to have been minor, however, the extent of the recent leak in April 1989 is unknown at this time. Groundwater sampling at the subject property is recommended in order to assess potential impacts from the Chevron site on groundwater beneath the subject property.

3. No potential asbestos containing materials were observed during inspection of the houses at the subject property; however, since the houses were constructed before the 1960's, there is a potential for asbestos occurrence in construction materials.

#### PHASE II SITE CHARACTERIZATION

On August 15, 1989 Phase II soil and groundwater sampling was conducted at the 1630 162nd Avenue site in San Leandro in accordance with McLaren's August 11, 1989 proposal submitted to Kaufman and Broad.

Prior to conducting any field sampling, an OSHA required, site specific, Health and Safety Plan was prepared, and underground utility clearances were conducted at all drill rig sample locations.

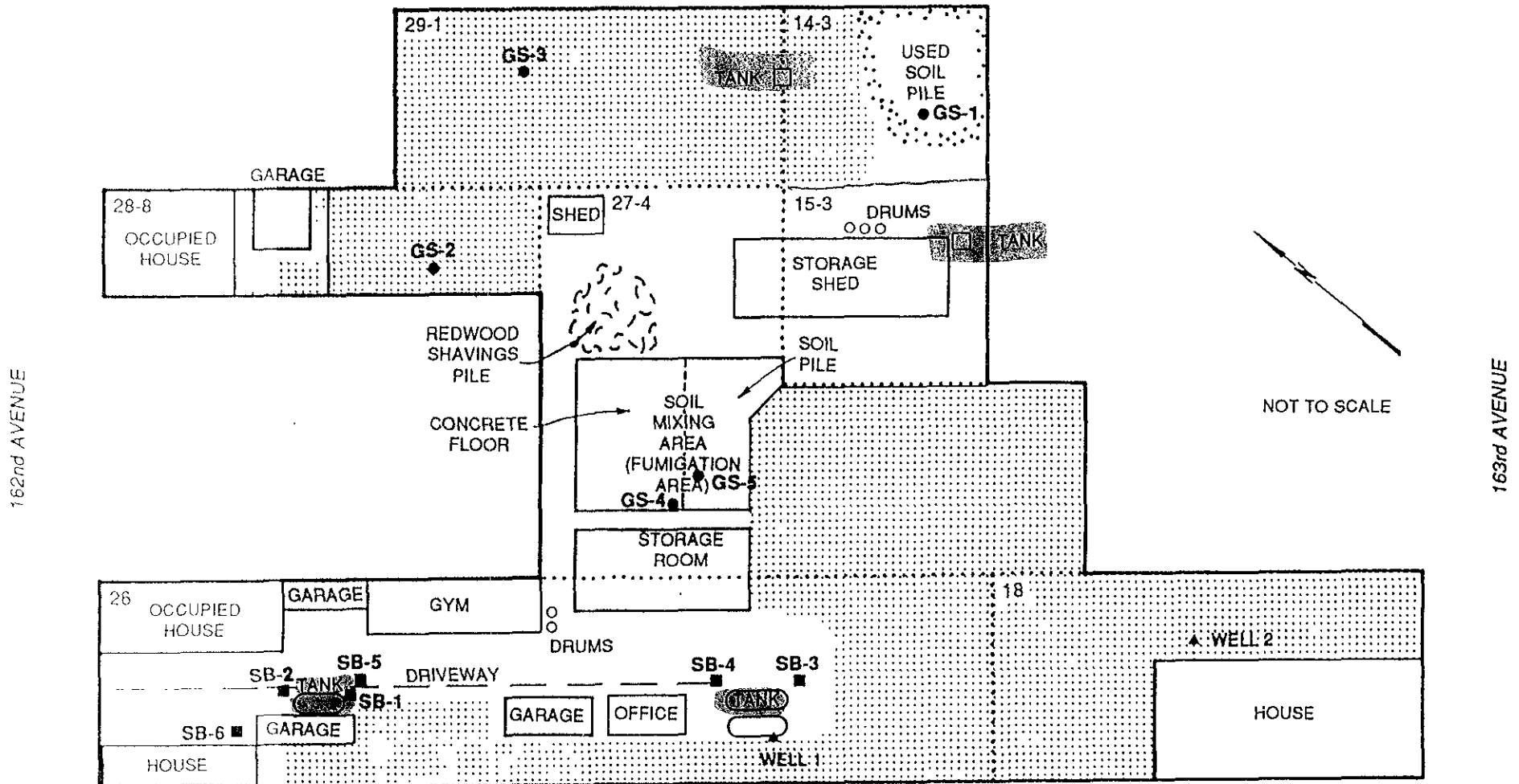
#### Planting Area Soil Sampling

Five grab soil samples were collected at selected locations throughout the site where herbicides and/or pesticides were suspected to have been applied. The owner/manager of the nursery, Mr. Hiro Fukushima indicated that pesticide use was minimal and applications were restricted to a several year cycle. Mr. Fukushima indicated that herbicides were used every two or three years on open areas only, not within the greenhouses. Mr. Fukushima recalled using two types of herbicides, amitrole and atrazine.

All soil sample locations are shown on Figure 2. Grab samples GS-1 through GS-5 were collected using a hand auger equipped with a manually driven sampler. The hand sampler consists of a drilling head at the end of the sampler in which a two-inch by six-inch brass tube is inserted. The driving head is driven into the soil by a 25 pound weight that slides on a shaft connection to the driving head. After sampling, the sampler is extracted from the borehole and the brass tubes are removed from the



FIGURE 2  
SOIL BORING AND  
GRAB SAMPLE LOCATIONS  
1630 - 162nd AVENUE



LEGEND

- GREEN HOUSE OR OUTDOOR NURSERY
- 29-1 PARCEL NUMBER
- PARCEL BOUNDARIES
- SB-1 SOIL BORING LOCATION
- GS-1 GRAB SAMPLE LOCATION
- WELL



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sampler. The brass tube is immediately capped at both ends to ensure an air tight seal to prevent volatilization of chemicals. Samples are labelled and placed in a cooler packed with ice and transported to the laboratory under chain-of-custody. All analyses were performed on a 24-hour turnaround.

Grab samples were collected at 1.0 to 1.5 feet below grade in all five locations. Each grab sample was analyzed for volatile halogenated organic compounds (EPA Method 8010, modified) by McLaren Analytical Laboratory (MAL), chlorinated herbicides (EPA Method 8150), and chlorinated pesticides and polychlorinated biphenyls (PCBs) (EPA Method 8080) by AnLab Analytical Laboratory (AAL).

Analytical results of soil samples GS-1 through GS-5 are described in Table 1. Grab sample analytical data sheets and chain-of-custody records are included as Appendix B. Analytical results of grab samples indicate that small quantities of herbicides and pesticides are present in shallow soils at the site, however, concentrations detected are only slightly above the detection limit, and well below the regulatory action levels described in Table 1.

#### Gasoline Tank Soil Sampling and Analysis

To determine if the two on-site gasoline tanks had leaked or were currently leaking, one boreholes were drilled at each end of the two underground tanks.

Phase II soil borings (SB1, SB2, SB3, and SB4) were drilled using a Mobile B-53 hollow stem auger drill rig equipped with eight-inch outside diameter (OD) hollow stem augers. Soil samples were collected using a California Modified Split-Spoon Sampler fitted with six-inch brass tubes. Soil samples were collected at 1.0 to 1.5, 5.5 to 6.0, 7.0 to 7.5, and 10.0 to 10.5 feet below grade in all four boring locations. Each soil sample was evaluated in the field for texture (using both the United States Department of Agriculture and United Soil Classification System), color, and moisture content. In addition, all soil samples were field screened for organic vapors using a photoionization device (PID). PID readings were used to preliminarily determine if contamination was present and to select those soil samples which would be submitted for laboratory analysis. Soil drilling logs are included as Appendix A. Phase II soil analytical data sheets are included as Appendix C.



TABLE 1

GRAB SAMPLE ANALYTICAL RESULTS  
(mg/kg = parts per million)

<u>Sample Designation</u>	<u>EPA Method 8010</u>	<u>EPA Method 8150</u>	<u>EPA Method 8080</u>
GS-1	--- <sup>1</sup>	0.01 2,4,5-TP <sup>2</sup>	---
GS-2	---	---	0.001 4,4-DDE <sup>3</sup>
GS-3	---	---	0.002 4,4-DDD <sup>3</sup> 0.003 4,4-DDE
GS-4	---	0.1 dichloroprop	0.002 4,4-DDD 0.002 4,4-DDE 0.005 4,4-DDT <sup>3</sup>
GS-5	---	---	0.002 4,4-DDD 0.001 4,4-DDE

<sup>1</sup> = Compound not detected

<sup>2</sup> = 2,4,5 trichlorophenol regulatory action level\* is 1.0 ppm

<sup>3</sup> = DDD, DDE, and DDT regulatory action level is 1.0 ppm

\* Regional Water Quality Control Board, Jon Marshack, May, 1989.

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Soil borings SB1 and SB2 were drilled at the east and west ends, respectively, of the northern (closest to 162nd Avenue) underground tank. SB3 and SB4 were drilled at the east and west ends, respectively, of the southern underground tank. The bottoms of both tanks are estimated by Mr. Fukushima to be approximately 6.5 feet below grade. The soil samples collected at 7.0 to 7.5 feet below grade in SB3 and SB4 were submitted for laboratory analysis based on their proximity to the bottom of the tank. Saturated conditions were not encountered during the drilling of SB1 or SB2. No PID readings, or other field observations indicated that contamination was present in SB3 or SB4.

\* Field observations during the drilling and sampling of SB1 and SB2, including PID readings increasing with depth, indicated that contamination was present in the deepest soil samples collected, at 10.0 to 10.5 feet below grade. Based on these observations, the 10.0 to 10.5 foot samples from SB1 and SB2 were submitted for laboratory analysis. Soil samples from SB1 through SB4 were submitted for gasoline (total volatile hydrocarbons, TVH), benzene, toluene, ethylbenzene, and xylenes (BTEX) by California Department of Health Services (DHS) Leaking Underground Fuel Tank (LUFT) methods. These samples were analyzed by McLaren Analytical Laboratory. Analytical results of soil samples from SB3 and SB4 did not show concentrations of gasoline (TVH), benzene, toluene, ethylbenzene, or xylenes above detection limits. Soil samples from SB1 and SB2 had total volatile hydrocarbon concentrations at 230 and 79 parts per million (ppm), respectively. Xylenes were also present at concentrations above the detection limit in SB1 and SB2; p-xylene was detected at 3 ppm in SB1, and 3 ppm in SB2. In addition, m-xylene was detected in SB2 at 7 ppm, making the total xylenes in SB2 equal to 10 ppm. No other BTEX compounds were detected in SB1 and SB2. \*

Total volatile hydrocarbon concentration "action levels" are determined on a case by case basis by the regulatory agency which has jurisdiction over a specific site. The subject site, in San Leandro falls under the jurisdiction of the Regional Water Quality Control Board (RWQCB) and the Alameda County Environmental Health Department (ACEHD). The RWQCB and ACEHD "action levels" require that any TVH soil concentration greater than 1000 ppm is classified as hazardous waste and must be remediated (e.g. excavated). Soil hydrocarbon concentrations greater than 100 ppm but less than 1000 ppm can be left in place in certain circumstances. However, the level of on-going monitoring the ACEHD would require may make this a more costly option than remediation. Furthermore, ACEHD representatives





indicated that cleanup to detection level (10 ppm) is currently being required.

The regulatory level for total xylenes in a solid to protect groundwater is 620 ppm, based on the RWQCB "Water Quality Goals" by Jon Marshack, May 1989. Total xylenes detected in SB1 and SB2 are well below this regulatory level.

#### Groundwater Sampling

Grab water samples were collected from two of the on-site wells. These wells are both reported by Mr. Fukushima to be sixty feet deep, with six-inch inside diameter casings. Well 1, the active domestic well, was sampled at the tap. The water was allowed to run for several minutes prior to filling the glass containers provided by the laboratory. Well 2, an inactive well, was sampled using a Teflon bailer. Grab water samples from both wells were analyzed for gasoline (TVH)/BTEX by DHS LUFT methods, chlorinated pesticides by EPA Method 608, and volatile organic compounds (VOC) by EPA Method 624. The gasoline (TVH)/BTEX and VOC analyses were completed by McLaren Analytical Laboratory; the pesticide analyses were completed by AnLab. All samples were analyzed on a 24-hour rush basis.

total depth measured?

Grab sample analytical data sheets are included as Appendix D. Analytical results of grab water samples indicate that no TVH/BTEX, VOC, or chlorinated pesticide compounds are present in groundwater above detection limits.

#### PHASE III SITE CHARACTERIZATION

Results of all Phase II soil and water analyses were communicated verbally to Kaufman and Broad immediately upon receipt from the laboratory. At that time, McLaren made recommendations for additional soil and water sampling to define the extent of contamination detected in soil samples collected from beneath the northern gasoline tank. ~~Three soil borings which would be completed as groundwater monitoring wells were recommended to be drilled in the vicinity of the tank, one upgradient and two downgradient.~~ However, due to restricted access no downgradient groundwater monitor wells were proposed. One soil boring was proposed upgradient of the tank in the vicinity of SB1 to define the vertical extent of contamination, and one soil boring was proposed as close to the



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downgradient side of the tank as access would permit to further define the lateral extent of contamination.

SB5 and SB6 were drilled on August 31, 1989 using a CME-55 hollow stem auger drill rig equipped with eight-inch OD hollow stem augers. SB5 was drilled upgradient of the tank, three feet from the location of SB1. Soil samples from SB5 were collected from 14.0 to 16.5 feet below grade. Soil samples from SB6, drilled in the closest accessible downgradient location, were collected between 5.0 and 19.5 feet below grade. Soil samples submitted for laboratory analyses were the 14.5 to 15.0 foot sample from SB5, and the 9.5 to 10.0 foot sample from SB6.

Based on information obtained from the Alameda County Public Works Department, first groundwater was expected to be at approximately 29 feet below grade.

Groundwater samples were proposed to be collected using a hydropunch groundwater sampling device. The hydropunch requires a minimum of three to five feet of water bearing formation be encountered in order to collect water samples. The advantage of using the hydropunch to collect groundwater samples is that the sample catcher is advanced ahead of the driving point of the hydropunch, therefore the water sample does not come into contact with the potentially contaminated soil above the water bearing zone. Groundwater was encountered in SB5 at approximately 13 feet below grade. Groundwater was encountered in SB6 at approximately 10.5 feet below grade. Two attempts (SB5 and SB6) were made to use the hydropunch, however, the water bearing formation encountered at these two locations was not three to five feet thick. The formations encountered consisted of alternating lenses of coarse grained, saturated, sands and fine grained, moist lenses of sandy clay.

One grab water sample was collected from each borehole using a teflon bailer. The boreholes were drilled to a total depth of approximately 6 to 8 feet below where water was encountered during drilling and sampling. Water was allowed to accumulate in the borehole and a bailer was used to retrieve a grab water sample. Information obtained from the Alameda Public Works Department indicates that groundwater in the area is generally encountered at approximately 29 feet below grade. Shallow water encountered during Phase III investigations may be a limited, perched, zone.



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Phase III soil and groundwater samples were analyzed by McLaren Analytical Lab for gasoline (TVH)/BTEX compounds using DHS LUFT analysis on a 24-hour turnaround. Phase III soil and water analytical data sheets and chain-of-custody records are included as Appendix E.

One soil sample from each borehole, the 14.5 to 15.0 foot sample from SB5, and the 9.5 to 10.0 foot from SB6, were submitted for laboratory analysis. The sample from SB5 was collected beneath the saturated lenses in the moist, fine grained, aquitard material. The sample from SB6 was collected just above the water table in the unsaturated soil.

Analytical results for soil samples collected from SB5 and SB6 indicate that TVH/BTEX compounds are not present above detection limits in soil beneath the saturated zone in SB5, or in unsaturated soil in SB6.

Analytical results of grab water samples collected from SB5 and SB6 showed 4.5 parts per billion (ppb) of benzene, 9.9 ppb of p-xylene, 0.8 ppb of m-xylene, and 290 ppb of total volatile hydrocarbons in SB5. Benzene was the only compound detected in the grab water sample collected from SB6, at a concentration of 1.6 ppb.

The California Regional Water Quality Control Board, Central Valley Region, "Water Quality Goals" guidelines prepared by Jon Marshack, dated May 1989 set State Maximum Contaminant Levels (MCLs) for benzene at 1.0 ppb, and total xylenes at 1750 ppb. Grab water samples collected from both SB5 and SB6 exceed the State MCLs for benzene. However, these samples may not be representative of groundwater quality, since these are grab samples collected through the auger.

#### Phase II and III Conclusions

Conclusions regarding site characterization at this site include the following:

1. Soil grab samples GS1 through GS5 were analyzed to determine the presence of selected pesticides, herbicides, and volatile organic compounds. The concentrations of chlorinated pesticides and chlorinated herbicides detected are well below applicable regulatory action levels. Methyl bromide fumigant was not detected in any of these samples.



2. Grab groundwater samples collected from the existing on-site wells (1 and 2) did not indicate the presence of gasoline (TVH/BTEX and diesel), chlorinated pesticides, or volatile organic compounds.
3. Analytical results of soil samples collected from SB1 and SB2 during the Phase II investigation indicated that gasoline (TVH) contamination is present in soil beneath the northern underground storage tank. The TVH concentrations found in SB1 (230 ppm) exceed the 100 ppm regulatory "action level", and the level found in SB2 (79 ppm) exceeds the detection level of 10 ppm.
5. Soil samples collected from SB5 and SB6 during the Phase III investigation did not reveal detectable levels of gasoline (TVH and BTEX compounds). The soil sample from SB5 was taken from aquitard material beneath the saturated zone underlying the tank. The soil sample from SB6 was collected from just above the water table, and indicates that the soil contamination has not migrated laterally to this location, which is approximately 30 feet in a presumed downgradient direction.
6. Grab groundwater samples collected through borehole SB5 shows the presence of benzene and TVH, and the sample from SB6 shows the presence of benzene. Due to uncertainties associated with the sample collection techniques and the potential for the samples to have come into contact with contaminated soil, these samples may not be representative of actual chemical concentrations in groundwater beneath the site. However, the presence of benzene in SB6 at any level, does indicate that lateral migration in groundwater has occurred.

Recommendations for further site characterizations and/or remediation include:

1. The northern underground gasoline tank should be removed and soil samples collected from the excavation according to RWQCB guidelines. Additional contaminated soil should be excavated and removed at that time based on field observations and instrument measurements.
2. To further define the lateral and vertical extent of contamination, additional soil boring samples should be taken, three monitoring wells should be installed, and the groundwater flow direction determined. This will necessitate removal of some of the existing



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structures located in the presumed downgradient direction of the tank. Additionally, because the groundwater encountered during the Phase III investigation may be perched water, one monitoring well should be installed in the second water bearing zone.

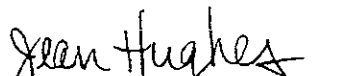
3. Unauthorized Release Report should be filed with the San Leandro Fire Department, Alameda County Environmental Health Department, and the Regional Water Quality Control Board on behalf of the tank owner. It is likely one or more of these agencies will require immediate source removal and initiation of a groundwater monitoring program.

It should be noted that this environmental assessment did not include asbestos sampling or hydrogeologic site characterization and only limited soil and groundwater sampling and analysis was performed. It should also be noted that regulatory files are often difficult to access and are often incomplete, particularly with regard to historical data. Therefore, the results of the environmental assessment should be reviewed as a reasonably accurate estimate of the existing conditions of the property, given the above, project limitations. Despite these limitations, it is McLaren's opinion that the environmental assessment provides an appropriate degree of confidence to preliminarily determine if significant environmental concerns exist on the property.

Please call if you have questions regarding any of the above.

Sincerely,

  
Georgina Dannatt  
Program Manager

  
Jean Hughes  
Senior Soil Scientist

Enclosure

0927DAN2.K&B



APPENDIX A  
SOIL DRILLING LOGS



McLAREN

# SOIL DRILLING LOG

SB/MW # : SB-1  
 # D- 4375  
 Page 1 of 1  
 Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 4' EAST OF NORTHERN TANK FILLPORT  
 ELEVATION \_\_\_\_\_ MONITORING DEVICE 580A OVM  
 SAMPLING DATE(S) 8-15-89 START \_\_\_\_\_ FINISH \_\_\_\_\_  
 SAMPLING METHO 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53  
 MEMO \_\_\_\_\_

Depth Below Surface (ft.)	Penetration Results		Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
	Blows 6"-6"-6"	EFF								
			1.0-1.5	4742	2.0	Asphalt (4")	AC			<p>Concrete</p> <p>Backfilled with Granular Bentonite</p> <p>11' T.D.</p>
5	2-4-11	5	5.0-6.5	4747	2.5	Very dark gray (10YR 3/1) sandy clay; 40% clay; very stiff; highly plastic; medium and coarse sand; slightly moist to moist.	CH			
	4-6-9	14	6.5-8.0	4748	29	Very dark grayish brown (10YR 3/2) sandy clay; 50% clay; very stiff; highly plastic; medium sand; slightly moist. <del>Strong odors</del>	CH			
10	6-9-12	21	9.5-11.0	4749	307	Yellowish brown (10YR 5/4) sandy clay; 35% clay; medium sand; slightly moist. <del>Strong odors</del>	CL			

H. Hirschfeld  
 SIGNATURE OF FIELD SUPERVISOR  
 Associate Soil Scientist

John H. ...  
 SIGNATURE OF REVIEWER  
 Senior Soil Scientist

TITLE \_\_\_\_\_

TITLE \_\_\_\_\_



McLAREN

# SOIL DRILLING LOG

SB/MW # : SB-2  
 # D- 4374  
 Page 1 of 1  
 Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 8' NW OF NORTHERN TANK  
 ELEVATION \_\_\_\_\_ MONITORING DEVICE 580A OVM  
 SAMPLING DATE(S) 8-15-89 START \_\_\_\_\_ FINISH \_\_\_\_\_  
 SAMPLING METHOD 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53  
 MEMO \_\_\_\_\_

Depth Below Surface (ft.)	Penetration Results		Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
	Blows 6"-6"-6"	BF								
			1.0-1.5	4743	43	Asphalt (5") and roadbase.	RB			
5'	6-11-15	26	5.0-6.5	4744	35	Very dark gray (10YR 3/1) sandy clay; 40% clay; very stiff; highly plastic; medium and coarse sand; slightly moist to moist. <del>Slightly streaky</del>	CH			Backfilled with Granular Bentonite
	6-12-16	28	6.5-8.0	4745	151	<del>petroleum odor</del>				
10'	7-12-16	28	9.5-11.0	4746	383	Yellowish brown (10YR 5/4) sandy clay; 40% clay; very stiff; highly plastic; moist. <del>Strong</del>	CH			T.D.

*H. Hirschfeld*  
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*Joan Hughes*  
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 Senior Soil Scientist

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TITLE \_\_\_\_\_





# SOIL DRILLING LOG

McLAREN

SB/MW # : SB-3  
 # D- 4376  
 Page 1 of 1  
 Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 5' EAST OF SOUTHERN TANK FILLPORT  
 ELEVATION \_\_\_\_\_ MONITORING DEVICE 580A OVM  
 SAMPLING DATE(S) 8-15-89 START \_\_\_\_\_ FINISH \_\_\_\_\_  
 SAMPLING METHOD 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53  
 MEMO \_\_\_\_\_

Depth Below Surface (ft.)	Penetration Results		Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
	Blows 6"-6"-6"	EFF								
			1.0-15	4750	2.5	Very dark gray (10YR 3/1) sandy clay; 35% clay; stiff; highly plastic; coarse sand; slightly moist.	CL			<p>Concrete</p> <p>Backfilled with Granular Bentonite</p> <p>11' T.D.</p>
5	4-6-11	17	5.0-6.5	5101	0.7	Very dark gray (10YR 3/1) sandy clay; 40% clay; very stiff; highly plastic; fine and medium sand; slightly moist to moist.	CH			
	6-11-14	25	6.5-8.0	5102	0.7					
10	5-9-11	20	9.5-11.0	5103	0.1	Yellowish brown (10YR 5/4) sandy clay; 35% clay; stiff; highly plastic; moist.	CL			
15										
20										
25										
30										

*H. Hirschfeld*  
 SIGNATURE OF FIELD SUPERVISOR  
 Associate Soil Scientist

*Jean Hughes*  
 SIGNATURE OF REVIEWER  
 Senior Soil Scientist

TITLE

TITLE



McLAREN

# SOIL DRILLING LOG

SB/MW # : SB-4  
 # D-4377  
 Page 1 of 1  
 Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 3' NE OF SOUTHERN TANK  
 ELEVATION \_\_\_\_\_ MONITORING DEVICE 580A OVM  
 SAMPLING DATE(S) 8-15-89 START \_\_\_\_\_ FINISH \_\_\_\_\_  
 SAMPLING METHOD 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53  
 MEMO \_\_\_\_\_

Depth Below Surface (ft.)	Penetration Results		Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
	Blows 6"-6"-6"	EFF								
			1.0-15	5104	0.7	Very dark gray (10YR 3/1) sandy clay; 35% clay; stiff; highly plastic; coarse sand; slightly moist.	CL			<p>Concrete</p> <p>Backfilled with Granular Bentonite</p> <p>11' T.D.</p>
5	4-10-14	24	5.0-6.5	5105	0.5	Very dark gray (10YR 3/1) sandy clay; 45% clay; very stiff; highly plastic; fine and medium sand; slightly moist.	CH			
	6-11-14	25	6.5-8.0	5106	0.5					
10	5-10-15	25	9.5-11.0	5107	0	Yellowish brown (10YR 5/4) sandy clay; 35% clay; stiff; highly plastic; small pebble gravel; moist.	CL			
15										
20										
25										
30										

*H. Hirschfeld*  
 SIGNATURE OF FIELD SUPERVISOR  
 Associate Soil Scientist  
 TITLE

*Sean Hughes*  
 SIGNATURE OF REVIEWER  
 Senior Soil Scientist  
 TITLE



# SOIL DRILLING LOG

McLAREN

SB/MW # : SB-5  
# D- 4378  
Page 1 of 1  
Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 7 EAST OF NORTHERN TANK FILLPORT  
ELEVATION \_\_\_\_\_ MONITORING DEVICE 580A OVM  
SAMPLING DATE(S) 8-31-89 START \_\_\_\_\_ FINISH \_\_\_\_\_  
SAMPLING METHO 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT ENVIRONMENTAL  
MEMO GRAB WATER SAMPLE COLLECTED WITH BAILER AT 12' EXPLORATION  
CME - 55

Depth Below Surface (ft.)	Penetration Results		Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
	Blows 6"-6'-6"	BFF								
0						Asphalt (4")	AC			Concrete
5						Very dark gray (10YR 3/1) sandy clay; 40% clay; very stiff; highly plastic; medium and coarse sand; slightly moist to moist.	CH			Backfilled with Granular Bentonite
10						Very dark grayish brown (10YR 3/2) sandy clay; 50% clay; very stiff; highly plastic; medium sand; slightly moist.	CH			
15	8-17-19	38	14.0-15.5	5113	-	Yellowish brown (10YR 5/4) sandy clay; 35% clay; medium sand; slightly moist.	CL			
15	9-16-17	33	15.5-16.5	5115	3.6	Brown (10YR 5/3) sandy loam; 20% clay; slightly plastic; medium and coarse sand; saturated.	SC-SM			
16						Brown (10YR 5/3) sandy clay; 45% clay; very stiff; highly plastic; moist.	CH		16' T.D.	
20										
25										
30										

*Robert Fischhoff*  
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Associate Soil Scientist  
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*John Hirschfeld*  
SIGNATURE OF REVIEWER  
Senior Soil Scientist  
TITLE



McLAREN

# SOIL DRILLING LOG

SB/MW # : SB-6  
 # D- 4379  
 Page 1 of 1  
 Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 13' NW OF GARAGE ADJACENT TO NORTHERN TANK  
 ELEVATION \_\_\_\_\_ MONITORING DEVICE 580A OVM  
 SAMPLING DATE(S) 8-31-89 START \_\_\_\_\_ FINISH \_\_\_\_\_  
 SAMPLING METHO 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT ENVIRONMENTAL  
 MEMO GRAB WATER SAMPLE COLLECTED WITH BAILER AT 14' EXPLORATION  
 \_\_\_\_\_ CME - 55

Depth Below Surface (ft.)	Penetration Results		Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
	Blows 6"-6"-6"	BFF								
0						Asphalt (4") and roadbase.	RB			Concrete
5	4-6-9	15	5.0-6.5	-	2.6	Black (10YR 2/1) silty clay; 45% clay; very stiff; highly plastic; slightly moist.	CH			Backfilled with Granular Bentonite
	4-7-11	18	6.5-8.0	5116	2.1					
	6-8-13	21	9.0-10.5	5117	2.0	Very dark grayish brown (10YR 3/2) sandy clay; 40% clay; stiff; highly plastic; medium to coarse sand; slightly moist.	CH			
10										
	6-9-12	21	15.0-16.5	-	-	Brown (10YR 5/3) sandy clay; 35% clay; very stiff; highly plastic; fine to very coarse sand; fine pebble gravel; slightly moist to moist. 3" lens of loamy sand at 10.5'; saturated. 3" lens of loamy sand at 14.0'; saturated.	CL (SM)			
15										
	8-11-17	28	18.0-19.5	5118	2.1	Brown (10YR 5/3) silty clay; 45% clay; very stiff; highly plastic; moist.	CH			
20									19.5'	T.D.
25										
30										

*H. Hirschfeld*  
 SIGNATURE OF FIELD SUPERVISOR  
 Associate Soil Scientist  
 TITLE

*Jean Hughes*  
 SIGNATURE OF REVIEWER  
 Senior Soil Scientist  
 TITLE

APPENDIX B

GRAB SAMPLE ANALYTICAL DATA SHEETS  
AND  
CHAIN-OF-CUSTODY RECORDS

VOLATILE HALOGENATED ORGANIC COMPOUNDS  
EPA METHOD 8010 (MODIFIED)

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2121</u>
Sample Location: <u>Outside GS-1 1.0-1.5</u>	Lab ID Number: <u>29361</u>
Sample Number: <u>5108</u>	Date Received: <u>08/16/89</u>
Date Sampled: <u>08/15/89</u>	Date Analyzed: <u>08/22/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u>	<u>REPORTING LIMIT</u>
	ug/g (ppm)	ug/g (ppm)
Chloromethane	< 0.1	0.1
Bromomethane	< 0.1	0.1
Vinyl Chloride	< 0.03	0.03
Chloroethane	< 0.1	0.1
Methylene Chloride	< 0.5	0.5
Trichlorofluoromethane	< 0.02	0.02
1,1-Dichloroethylene	< 0.02	0.02
1,1-Dichloroethane	< 0.02	0.02
1,2-Dichloroethylene	< 0.02	0.02
Chloroform	< 0.02	0.02
1,2-Dichloroethane	< 0.02	0.02
1,1,1-Trichloroethane	< 0.02	0.02
Carbon Tetrachloride	< 0.02	0.02
Bromodichloromethane	< 0.02	0.02
1,2-Dichloropropane	< 0.02	0.02
c-1,3-Dichloropropene	< 0.02	0.02
Trichloroethylene	< 0.02	0.02
Chlorodibromomethane	< 0.03	0.03
1,1,2-Trichloroethane	< 0.02	0.02
t-1,3-Dichloropropene	< 0.02	0.02
Bromoform	< 0.03	0.03
1,1,2,2-Tetrachloroethane	< 0.03	0.03

Lab ID: 29361

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u>	<u>REPORTING LIMIT</u>
Tetrachloroethylene	< 0.02	0.02
Chlorobenzene	< 0.02	0.02
1,3-Dichlorobenzene	< 0.02	0.02
1,2-Dichlorobenzene	< 0.02	0.02
1,4-Dichlorobenzene	< 0.02	0.02
Freon 113	< 0.2	0.2
Surrogate recovery (percent):		
Bromochloromethane	107%	
Bromofluorobenzene	107%	

Comments:

Analyst: A. Putnam Reviewed By: T. Leyesa Date: 08/24/89

Laboratory Director: J. M. Bartell





ANALYTICAL LABORATORY  
 A DIVISION OF DEWANTE & STOWELL

1914 S STREET, SACRAMENTO, CALIFORNIA 95814 • 916-447-2946

CHLORINATED HERBICIDES  
 EPA 8150

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 1 of 12  
 Attn: Shakoora Azimi      Report #: 122559

Sample Description: 5108      Anlab ID#: 122559-1      Units: mg/kg  
 Outside GS-1

Date Sample      Date Sample Rec'd.      Date Analysis  
 Collected: 08/15/89      @ Lab: 08/16/89      Completed: 08/17/89

<u>COMPOUND</u>	<u>CONCENTRATION</u>	<u>MDL</u>
2,4-D.....	<0.1	0.1
2,4-DB.....	<0.1	0.1
2,4,5-T.....	<0.01	0.01
2,4,5-TP.....	0.01	0.01
Dalapon.....	<0.5	0.5
Dicamba.....	<0.01	0.01
Dichloroprop.....	<0.1	0.1
Dinoseb.....	<0.01	0.01
MCPA.....	<5	5
MCPP.....	<5	5

Data Certified By Kandra Torrey      Report Approved By Tom King

:slw





ANALYTICAL LABORATORY

A DIVISION OF DEWANTE & STOWELL

1914 S STREET, SACRAMENTO, CALIFORNIA 95814 • 916-447-2946

Chlorinated Pesticides and PCB's
Organic Priority Pollutants
EPA #8080

Client: MCLAREN ANALYTICAL LABORATORY Report Date: 08/17/89 Page: 6 of 12
Attn: Shakoora Azimi Report #: 122559

Sample Description: 5108 Anlab ID#: 122559-1 Units: mg/kg
Outside GS-1

Date Sample Date Sample Rec'd. Date Analysis
Collected: 08/15/89 @ Lab: 08/16/89 Completed: 08/17/89

Table with 4 columns: STORET #, COMPOUND, CONCENTRATION, MDL\*. Lists various pesticides and PCBs with their respective concentrations and detection limits.

\*Increased detection limit due to dilution. Sample matrix interfered with analyte quantitation when analyzed undiluted.

Data Certified by [Signature: Keetra Torrey]
Report Approved by [Signature: Tom King]

:slw

VOLATILE HALOGENATED ORGANIC COMPOUNDS  
EPA METHOD 8010 (MODIFIED)

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2121</u>
Sample Location: <u>Outside GS-2 1.0-1.5</u>	Lab ID Number: <u>29362</u>
Sample Number: <u>5109</u>	Date Received: <u>08/16/89</u>
Date Sampled: <u>08/15/89</u>	Date Analyzed: <u>08/21/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u>	<u>REPORTING LIMIT</u>
	ug/g (ppm)	ug/g (ppm)
Chloromethane	< 0.1	0.1
Bromomethane	< 0.1	0.1
Vinyl Chloride	< 0.03	0.03
Chloroethane	< 0.1	0.1
Methylene Chloride	< 0.5	0.5
Trichlorofluoromethane	< 0.02	0.02
1,1-Dichloroethylene	< 0.02	0.02
1,1-Dichloroethane	< 0.02	0.02
1,2-Dichloroethylene	< 0.02	0.02
Chloroform	< 0.02	0.02
1,2-Dichloroethane	< 0.02	0.02
1,1,1-Trichloroethane	< 0.02	0.02
Carbon Tetrachloride	< 0.02	0.02
Bromodichloromethane	< 0.02	0.02
1,2-Dichloropropane	< 0.02	0.02
c-1,3-Dichloropropene	< 0.02	0.02
Trichloroethylene	< 0.02	0.02
Chlorodibromomethane	< 0.03	0.03
1,1,2-Trichloroethane	< 0.02	0.02
t-1,3-Dichloropropene	< 0.02	0.02
Bromoform	< 0.03	0.03
1,1,2,2-Tetrachloroethane	< 0.03	0.03

Lab ID: 29362

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u>	<u>REPORTING LIMIT</u>
Tetrachloroethylene	< 0.02	0.02
Chlorobenzene	< 0.02	0.02
1,3-Dichlorobenzene	< 0.02	0.02
1,2-Dichlorobenzene	< 0.02	0.02
1,4-Dichlorobenzene	< 0.02	0.02
Freon 113	< 0.2	0.2
Surrogate recovery (percent):		
Bromochloromethane	109%	
Bromofluorobenzene	97%	

Comments:

Analyst: S. Pedersen Reviewed By: A. Putnam Date: 08/23/89  
S. Pedersen A. Putnam

Laboratory Director: J. M. Bartell  
J. M. Bartell





ANALYTICAL LABORATORY  
A DIVISION OF DEWANTE & STOWELL

1914 S STREET, SACRAMENTO CALIFORNIA 95814 • 916-447-2946

CHLORINATED HERBICIDES  
EPA 8150

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 2 of 12  
Attn: Shakoora Azimi      Report #: 122559

Sample Description: 5109      Anlab ID#: 122559-2      Units: mg/kg  
Outside GS-2

Date Sample      Date Sample Rec'd.      Date Analysis  
Collected: 08/15/89      @ Lab: 08/16/89      Completed: 08/17/89

COMPOUND	CONCENTRATION	MDL
2,4-D.....	<0.1	0.1
2,4-DB.....	<0.1	0.1
2,4,5-T.....	<0.01	0.01
2,4,5-TP.....	<0.01	0.01
Dalapon.....	<0.5	0.5
Dicamba.....	<0.01	0.01
Dichloroprop.....	<0.1	0.1
Dinoseb.....	<0.01	0.01
MCPA.....	<5	5
MCPP.....	<5	5

Data Certified By Kendrick Torrey      Report Approved By Tom Kelly

:slw



ANALYTICAL LABORATORY  
A DIVISION OF DEWANTE & STOWELL

1914 S STREET, SACRAMENTO, CALIFORNIA 95814 • 916-447-2946

Chlorinated Pesticides and PCB's  
Organic Priority Pollutants  
EPA #8080

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 7 of 12  
Attn: Shakoor Azimi      Report #: 122559

Sample Description: 5109      Anlab ID#: 122559-2      Units: mg/kg  
Outside GS-2

Date Sample      Date Sample Rec'd.      Date Analysis  
Collected: 08/15/89      @ Lab: 08/16/89      Completed: 08/17/89

<u>STORET #</u>	<u>COMPOUND</u>	<u>CONCENTRATION</u>	<u>MDL</u>
39330	Aldrin.....	<0.001	0.001
39337	alpha-BHC.....	<0.001	0.001
39338	beta-BHC.....	<0.004	0.004
34259	delta-BHC.....	<0.004	0.004
39340	gamma-BHC.....	<0.001	0.001
39350	Chlordane.....	<0.004	0.004
39310	4,4'-DDD.....	<0.002	0.002
39320	4,4'-DDE.....	0.001	0.001
39300	4,4'-DDT.....	<0.002	0.002
39380	Dieldrin.....	<0.004	0.004
39361	Endosulfan I.....	<0.001	0.001
34356	Endosulfan II.....	<0.001	0.001
39351	Endosulfan sulfate.....	<0.004	0.004
39390	Endrin.....	<0.001	0.001
34366	Endrin aldehyde.....	<0.004	0.004
39410	Heptachlor.....	<0.002	0.002
39420	Heptachlor epoxide.....	<0.008	0.008
39400	Toxaphene.....	<0.04	0.04
34671	PCB 1016.....	<0.02	0.02
39488	PCB 1221.....	<0.02	0.02
39492	PCB 1232.....	<0.02	0.02
39496	PCB 1242.....	<0.02	0.02
39500	PCB 1248.....	<0.02	0.02
39504	PCB 1254.....	<0.02	0.02
39508	PCB 1260.....	<0.02	0.02

Data Certified by                     *Kawra Torrey*                    

Report Approved by                     *Tom King*                    

:slw

VOLATILE HALOGENATED ORGANIC COMPOUNDS  
EPA METHOD 8010 (MODIFIED)

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2121</u>
Sample Location: <u>Outside GS-3 1.0-1.5</u>	Lab ID Number: <u>29363</u>
Sample Number: <u>5110</u>	Date Received: <u>08/16/89</u>
Date Sampled: <u>08/15/89</u>	Date Analyzed: <u>08/21/89</u>

COMPOUND	ANALYTE CONCENTRATION	REPORTING LIMIT
	ug/g (ppm)	ug/g (ppm)
Chloromethane	< 0.1	0.1
Bromomethane	< 0.1	0.1
Vinyl Chloride	< 0.03	0.03
Chloroethane	< 0.1	0.1
Methylene Chloride	< 0.5	0.5
Trichlorofluoromethane	< 0.02	0.02
1,1-Dichloroethylene	< 0.02	0.02
1,1-Dichloroethane	< 0.02	0.02
1,2-Dichloroethylene	< 0.02	0.02
Chloroform	< 0.02	0.02
1,2-Dichloroethane	< 0.02	0.02
1,1,1-Trichloroethane	< 0.02	0.02
Carbon Tetrachloride	< 0.02	0.02
Bromodichloromethane	< 0.02	0.02
1,2-Dichloropropane	< 0.02	0.02
c-1,3-Dichloropropene	< 0.02	0.02
Trichloroethylene	< 0.02	0.02
Chlorodibromomethane	< 0.03	0.03
1,1,2-Trichloroethane	< 0.02	0.02
t-1,3-Dichloropropene	< 0.02	0.02
Bromoform	< 0.03	0.03
1,1,2,2-Tetrachloroethane	< 0.03	0.03

Lab ID: 29363

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u>	<u>REPORTING LIMIT</u>
Tetrachloroethylene	< 0.02	0.02
Chlorobenzene	< 0.02	0.02
1,3-Dichlorobenzene	< 0.02	0.02
1,2-Dichlorobenzene	< 0.02	0.02
1,4-Dichlorobenzene	< 0.02	0.02
Freon 113	< 0.2	0.2
Surrogate recovery (percent):		
Bromochloromethane	111%	
Bromofluorobenzene	98%	

Comments:

Analyst: S. Pedersen Reviewed By: A. Putnam Date: 08/23/89  
S. Pedersen A. Putnam  
Laboratory Director: J. M. Bartell  
J. M. Bartell





ANALYTICAL LABORATORY  
A DIVISION OF DEWANTE & STOWELL

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CHLORINATED HERBICIDES  
EPA 8150

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 3 of 12  
Attn: Shakoora Azimi      Report #: 122559

Sample Description: 5110      Anlab ID#: 122559-3      Units: mg/kg  
Outside GS-3

Date Sample      Date Sample Rec'd.      Date Analysis  
Collected: 08/15/89      @ Lab: 08/16/89      Completed: 08/17/89

COMPOUND	CONCENTRATION	MDL
2,4-D.....	<0.1	0.1
2,4-DB.....	<0.1	0.1
2,4,5-T.....	<0.01	0.01
2,4,5-TP.....	<0.01	0.01
Dalapon.....	<0.5	0.5
Dicamba.....	<0.01	0.01
Dichloroprop.....	<0.1	0.1
Dinoseb.....	<0.01	0.01
MCPA.....	<5	5
MCPP.....	<5	5

Data Certified By Kendra Torrey      Report Approved By Tom King

:slw





ANALYTICAL LABORATORY

A DIVISION OF DEWANTE & STOWELL

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Chlorinated Pesticides and PCB's
Organic Priority Pollutants
EPA #8080

Client: MCLAREN ANALYTICAL LABORATORY Report Date: 08/17/89 Page: 8 of 12
Attn: Shakoor Azimi Report #: 122559

Sample Description: 5110 Anlab ID#: 122559-3 Units: mg/kg
Outside GS-3

Date Sample Date Sample Rec'd. Date Analysis
Collected: 08/15/89 @ Lab: 08/16/89 Completed: 08/17/89

Table with 4 columns: STORET #, COMPOUND, CONCENTRATION, MDL. Lists various pesticides and PCBs with their respective concentrations and MDL values.

Data Certified by Kendra Torrey

Report Approved by Tom King

:slw

VOLATILE HALOGENATED ORGANIC COMPOUNDS  
EPA METHOD 8010 (MODIFIED)

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2121</u>
Sample Location: <u>Soil Mix Area GS-4 1.0-1.5</u>	Lab ID Number: <u>29364</u>
Sample Number: <u>5111</u>	Date Received: <u>08/16/89</u>
Date Sampled: <u>08/15/89</u>	Date Analyzed: <u>08/21/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/g (ppm)	<u>REPORTING LIMIT</u> ug/g (ppm)
Chloromethane	< 0.1	0.1
Bromomethane	< 0.1	0.1
Vinyl Chloride	< 0.03	0.03
Chloroethane	< 0.1	0.1
Methylene Chloride	< 0.5	0.5
Trichlorofluoromethane	< 0.02	0.02
1,1-Dichloroethylene	< 0.02	0.02
1,1-Dichloroethane	< 0.02	0.02
1,2-Dichloroethylene	< 0.02	0.02
Chloroform	< 0.02	0.02
1,2-Dichloroethane	< 0.02	0.02
1,1,1-Trichloroethane	< 0.02	0.02
Carbon Tetrachloride	< 0.02	0.02
Bromodichloromethane	< 0.02	0.02
1,2-Dichloropropane	< 0.02	0.02
c-1,3-Dichloropropene	< 0.02	0.02
Trichloroethylene	< 0.02	0.02
Chlorodibromomethane	< 0.03	0.03
1,1,2-Trichloroethane	< 0.02	0.02
t-1,3-Dichloropropene	< 0.02	0.02
Bromoform	< 0.03	0.03
1,1,2,2-Tetrachloroethane	< 0.03	0.03

Lab ID: 29364

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u>	<u>REPORTING LIMIT</u>
Tetrachloroethylene	< 0.02	0.02
Chlorobenzene	< 0.02	0.02
1,3-Dichlorobenzene	< 0.02	0.02
1,2-Dichlorobenzene	< 0.02	0.02
1,4-Dichlorobenzene	< 0.02	0.02
Freon 113	< 0.2	0.2
Surrogate recovery (percent):		
Bromochloromethane	112%	
Bromofluorobenzene	94%	

Comments:

Analyst: S. Pedersen Reviewed By: A. Putnam Date: 08/23/89  
S. Pedersen A. Putnam

Laboratory Director: J. M. Bartell  
J. M. Bartell





ANALYTICAL LABORATORY  
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CHLORINATED HERBICIDES  
EPA 8150

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 4 of 12  
Attn: Shakoor Azimi      Report #: 122559

Sample Description: 5111      Anlab ID#: 122559-4      Units: mg/kg  
Outside GS-4

Date Sample Collected: 08/15/89      Date Sample Rec'd. @ Lab: 08/16/89      Date Analysis Completed: 08/17/89

COMPOUND	CONCENTRATION	MDL
2,4-D.....	<0.1	0.1
2,4-DB.....	<0.1	0.1
2,4,5-T.....	<0.01	0.01
2,4,5-TP.....	<0.01	0.01
Dalapon.....	<0.5	0.5
Dicamba.....	<0.01	0.01
Dichloroprop.....	0.1	0.1
Dinoseb.....	<0.01	0.01
MCPA.....	<5	5
MCPP.....	<5	5

Data Certified By Kendra Tarcey      Report Approved By Tom King

:slw



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Chlorinated Pesticides and PCB's  
Organic Priority Pollutants  
EPA #8080

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 9 of 12  
Attn: Shakoora Azimi      Report #: 122559

Sample Description: 5111      Anlab ID#: 122559-4      Units: mg/kg  
Outside GS-4

Date Sample      Date Sample Rec'd.      Date Analysis  
Collected: 08/15/89      @ Lab: 08/16/89      Completed: 08/17/89

<u>STORET #</u>	<u>COMPOUND</u>	<u>CONCENTRATION</u>	<u>MDL</u>
39330	Aldrin.....	<0.001	0.001
39337	alpha-BHC.....	<0.001	0.001
39338	beta-BHC.....	<0.004	0.004
34259	delta-BHC.....	<0.004	0.004
39340	gamma-BHC.....	<0.001	0.001
39350	Chlordane.....	<0.004	0.004
39310	4,4'-DDD.....	0.002	0.002
39320	4,4'-DDE.....	0.002	0.001
39300	4,4'-DDT.....	0.005	0.002
39380	Dieldrin.....	<0.004	0.004
39361	Endosulfan I.....	<0.001	0.001
34356	Endosulfan II.....	<0.001	0.001
39351	Endosulfan sulfate.....	<0.004	0.004
39390	Endrin.....	<0.001	0.001
34366	Endrin aldehyde.....	<0.004	0.004
39410	Heptachlor.....	<0.002	0.002
39420	Heptachlor epoxide.....	<0.008	0.008
39400	Toxaphene.....	<0.04	0.04
34671	PCB 1016.....	<0.02	0.02
39488	PCB 1221.....	<0.02	0.02
39492	PCB 1232.....	<0.02	0.02
39496	PCB 1242.....	<0.02	0.02
39500	PCB 1248.....	<0.02	0.02
39504	PCB 1254.....	<0.02	0.02
39508	PCB 1260.....	<0.02	0.02

Data Certified by Kendra Tarrey

Report Approved by Tom King

:slw

VOLATILE HALOGENATED ORGANIC COMPOUNDS  
EPA METHOD 8010 (MODIFIED)

Project: K&B SL-2

Lab Project  
Number: 2121

Sample  
Location: Soil Mix Area GS-5 1.0-1.5

Lab ID  
Number: 29365

Sample  
Number: 5112

Date  
Received: 08/16/89

Date  
Sampled: 08/15/89

Date  
Analyzed: 08/21/89

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/g (ppm)	<u>REPORTING LIMIT</u> ug/g (ppm)
Chloromethane	< 0.1	0.1
Bromomethane	< 0.1	0.1
Vinyl Chloride	< 0.03	0.03
Chloroethane	< 0.1	0.1
Methylene Chloride	< 0.5	0.5
Trichlorofluoromethane	< 0.02	0.02
1,1-Dichloroethylene	< 0.02	0.02
1,1-Dichloroethane	< 0.02	0.02
1,2-Dichloroethylene	< 0.02	0.02
Chloroform	< 0.02	0.02
1,2-Dichloroethane	< 0.02	0.02
1,1,1-Trichloroethane	< 0.02	0.02
Carbon Tetrachloride	< 0.02	0.02
Bromodichloromethane	< 0.02	0.02
1,2-Dichloropropane	< 0.02	0.02
c-1,3-Dichloropropene	< 0.02	0.02
Trichloroethylene	< 0.02	0.02
Chlorodibromomethane	< 0.03	0.03
1,1,2-Trichloroethane	< 0.02	0.02
t-1,3-Dichloropropene	< 0.02	0.02
Bromoform	< 0.03	0.03
1,1,2,2-Tetrachloroethane	< 0.03	0.03

Lab ID: 29365

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u>	<u>REPORTING LIMIT</u>
Tetrachloroethylene	< 0.02	0.02
Chlorobenzene	< 0.02	0.02
1,3-Dichlorobenzene	< 0.02	0.02
1,2-Dichlorobenzene	< 0.02	0.02
1,4-Dichlorobenzene	< 0.02	0.02
Freon 113	< 0.2	0.2
Surrogate recovery (percent):		
Bromochloromethane	107%	
Bromofluorobenzene	95%	

Comments:

Analyst: S. Pedersen  
S. Pedersen

Reviewed By: A. Putnam  
A. Putnam

Date: 08/23/89

Laboratory Director: J. M. Bartell  
J. M. Bartell





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CHLORINATED HERBICIDES  
EPA 8150

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 5 of 12  
Attn: Shakoora Azimi      Report #: 122559

Sample Description: 5112      Anlab ID#: 122559-5      Units: mg/kg  
Outside GS-5

Date Sample Collected: 08/15/89      Date Sample Rec'd. @ Lab: 08/16/89      Date Analysis Completed: 08/17/89

<u>COMPOUND</u>	<u>CONCENTRATION</u>	<u>MDL</u>
2,4-D.....	<0.1	0.1
2,4-DB.....	<0.1	0.1
2,4,5-T.....	<0.01	0.01
2,4,5-TP.....	<0.01	0.01
Dalapon.....	<0.5	0.5
Dicamba.....	<0.01	0.01
Dichloroprop.....	<0.1	0.1
Dinoseb.....	<0.01	0.01
MCPA.....	<5	5
MCPP.....	<5	5

Data Certified By Kendra Torrey      Report Approved By Tom King

:slw





Chlorinated Pesticides and PCB's  
Organic Priority Pollutants  
EPA #8080

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 10 of 12  
Attn: Shakoora Azimi      Report #: 122559

Sample Description: 5112      Anlab ID#: 122559-5      Units: mg/kg  
Outside GS-5

Date Sample      Date Sample Rec'd.      Date Analysis  
Collected: 08/15/89      @ Lab: 08/16/89      Completed: 08/17/89

<u>STORET #</u>	<u>COMPOUND</u>	<u>CONCENTRATION</u>	<u>MDL</u>
39330	Aldrin.....	<0.001	0.001
39337	alpha-BHC.....	<0.001	0.001
39338	beta-BHC.....	<0.004	0.004
34259	delta-BHC.....	<0.004	0.004
39340	gamma-BHC.....	<0.001	0.001
39350	Chlordane.....	<0.004	0.004
39310	4,4'-DDD.....	0.002	0.002
39320	4,4'-DDE.....	0.001	0.001
39300	4,4'-DDT.....	<0.002	0.002
39380	Dieldrin.....	<0.004	0.004
39361	Endosulfan I.....	<0.001	0.001
34356	Endosulfan II.....	<0.001	0.001
39351	Endosulfan sulfate.....	<0.004	0.004
39390	Endrin.....	<0.001	0.001
34366	Endrin aldehyde.....	<0.004	0.004
39410	Heptachlor.....	<0.002	0.002
39420	Heptachlor epoxide.....	<0.008	0.008
39400	Toxaphene.....	<0.04	0.04
34671	PCB 1016.....	<0.02	0.02
39488	PCB 1221.....	<0.02	0.02
39492	PCB 1232.....	<0.02	0.02
39496	PCB 1242.....	<0.02	0.02
39500	PCB 1248.....	<0.02	0.02
39504	PCB 1254.....	<0.02	0.02
39508	PCB 1260.....	<0.02	0.02

Data Certified by Kendra Terrey

Report Approved by Tom King

:slw

# McLaren Analytical Laboratory

## Chain of Custody Record

L.P. 2121

№ 211308

ATTN: Jean Hughes

**24 HR RUSH**

PROJECT DESIGNATION **K & B SL-2**

SAMPLES TAKEN BY: **H. Hirschfeld H. Hirschfeld**

AREA	SAMPLE LOCATION DEPTH (ft)	DATE	TIME	SAMPLE TYPE		SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED
				WATER COMP	SOIL GRAB			
UGT	HA-2 10.0-10.5	8/15/89			X	4746	BRASS TUBE	645-BTXE (DHS-LUFT) <b>29357</b>
UGT	HA-1 10.0-10.5	8/15/89				4749		<b>29358</b>
UGT	HA-3 7.0-7.5	8/15				<del>5102</del>		<b>29359</b>
UGT	HA-4 7.0-7.5	8/15			V	5106	V	<b>29360</b>
SIDE	GS-1 1.0-1.5	8/15/89			X	5108	BRASS TUBE	EPA 8080 EPA 8150
	GS-2 1.0-1.5					5109		EPA 8010 <b>29367</b> <b>29362</b>
V	GS-3 1.0-1.5					5110		<b>29368</b> <b>29363</b>
MARKED	GS-4 1.0-1.5					5111		<b>29369</b> <b>29364</b>
V	GS-5 1.0-1.5	V			V	5112	V	<b>29370</b> <b>29365</b>

FIELD DISPOSITION:

IMMEDIATE DELIVERY

STORAGE

REFRIGERATOR

FREEZER

**ON ICE**

SECURED

NO

ALL THREE ANALYSES ON THESE FIVE SAMPLES

RELINQUISHED BY:

**H. Hirschfeld H. Hirschfeld**

RECEIVED BY:

**7:15 8/15/89**

RELINQUISHED BY:

RECEIVED BY:

RECEIVED FOR LABORATORY BY:

**Reynis Buxton**

DATE/TIME

**8-16-89 10:00**

METHOD OF SHIPMENT:

**FED Ex**

LABORATORY DISPOSITION

IMMEDIATE ANALYSIS

**24 HR RUSH**

STORAGE

REFRIGERATOR

FREEZER

CABINET

**samples sent out for analysis.**

REFRIGERATOR

FREEZER

CABINET

SECURED

YES NO

\* PRINT NAME AFTER SIGNATURE



McLaren Environmental Engineering

11101 White Rock Road, Rancho Cordova, CA 95670 (916) 638-3696

APPENDIX C

PHASE II  
SOIL ANALYTICAL DATA SHEETS  
AND  
CHAIN-OF-CUSTODY RECORDS

VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 8020 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2121</u>
Sample <u>NUGT</u>	Lab ID
Location: <u>HA-1 10.0-10.5'</u>	Number: <u>29358</u>
<u>SB</u>	
Sample Number: <u>4749</u>	Date Received: <u>08/16/89</u>
Date Sampled: <u>08/15/89</u>	Date Analyzed: <u>08/21/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/g (ppm)	<u>REPORTING LIMIT</u> ug/g (ppm)
Benzene	< 1	1.
Toluene	< 1	1.
Ethylbenzene	< 1	1.
p-Xylene	3.	1.
m-Xylene	< 1	1.
o-Xylene	< 1	1.
Total Volatile Hydrocarbons	230.	50.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	102%	

Comments: 1:50 dilution used in analysis.

Analyst: Inaite Luyssa Reviewed By: A Put Date: 08/24/89  
 T. Leyesa A. Putnam

Laboratory Director: J. M. Bartell  
 J. M. Bartell



VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 8020 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

RECEIVED  
 SEP 5 1989  
 McLAREN

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2121</u>
Sample Location: <u>NUGT HA-2 10.0-10.5'</u> <u>SB</u>	Lab ID Number: <u>29357</u>
Sample Number: <u>4746</u>	Date Received: <u>08/16/89</u>
Date Sampled: <u>08/15/89</u>	Date Analyzed: <u>08/18/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/g (ppm)	<u>REPORTING LIMIT</u> ug/g (ppm)
Benzene	< 2	2.
Toluene	< 2	2.
Ethylbenzene	< 2	2.
p-Xylene	3.	2.
m-Xylene	7.	2.
o-Xylene	< 2	2.
Total Volatile Hydrocarbons	< 100 *	100.
Surrogate recovery (percent)		
a,a,a-Trifluorotoluene	76%	

Comments: 1:100 dilution used in analysis due to late eluting matrix interference.  
 \* Total Volatile Hydrocarbons are present at 79 ppm which is below reporting limit.

Analyst: S. Pedersen Reviewed By: A. Putnam Date: 08/24/89

Laboratory Director: J. M. Bartell for: J. M. Bartell



VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 8020 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2121</u>
Sample Location: <u>SUGT</u> <u>HA-3 7.0-7.5'</u>	Lab ID Number: <u>29359</u>
Sample Number: <u>SB</u> <u>5102</u>	Date Received: <u>08/16/89</u>
Date Sampled: <u>08/15/89</u>	Date Analyzed: <u>08/17/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/g (ppm)	<u>REPORTING LIMIT</u> ug/g (ppm)
Benzene	< 0.02	0.02
Toluene	< 0.02	0.02
Ethylbenzene	< 0.02	0.02
p-Xylene	< 0.02	0.02
m-Xylene	< 0.02	0.02
o-Xylene	< 0.02	0.02
Total Volatile Hydrocarbons	< 1	1.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	86%	

Comments:

Analyst: A. Putnam Reviewed By: T. Leyesa Date: 08/24/89

Laboratory Director: J. M. Bartell



VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 8020 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2121</u>
Sample Location: <u>SUGT</u> <u>HA-4 7.0-7.5'</u> <u>SB</u>	Lab ID Number: <u>29360</u>
Sample Number: <u>5106</u>	Date Received: <u>08/16/89</u>
Date Sampled: <u>08/15/89</u>	Date Analyzed: <u>08/21/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/g (ppm)	<u>REPORTING LIMIT</u> ug/g (ppm)
Benzene	< 0.02	0.02
Toluene	< 0.02	0.02
Ethylbenzene	< 0.02	0.02
p-Xylene	< 0.02	0.02
m-Xylene	< 0.02	0.02
o-Xylene	< 0.02	0.02
 Total Volatile Hydrocarbons	 < 1	 1.
 Surrogate recovery (percent) a,a,a-Trifluorotoluene	  106%	

Comments:

Analyst: T. Leyesa Reviewed By: A. Putnam Date: 08/22/89

Laboratory Director: J. M. Bartell



# McLaren Analytical Laboratory

## Chain of Custody Record

L.F. 2121  
 No 211308  
 Attn: Jean Hughes

24 HR RUSH

PROJECT DESIGNATION K&B SL-2 SAMPLES TAKEN BY: H. Hirschfeld H. Hirschfeld

AREA	SAMPLE LOCATION DEPTH (ft)	DATE	TIME	SAMPLE TYPE		SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED
				WATER COMP   GRAB	SOIL			
UGT	HA-2 10.0-10.5	8/15/89			X	4746	BRASS TUBE	GAS-BTXE (DAS-LUFT) <u>2935</u>
UGT	HA-1 10.0-10.5	8/15/89				4749		<u>29358</u>
UGT	HA-3 7.0-7.5	8/15				<del>5102</del>		<u>29359</u>
UGT	HA-4 7.0-7.5	8/15			✓	5106	✓	<u>29360</u>
SIDE	GS-1 1.0-1.5	8/15/89			X	5108	BRASS TUBE	EPA 8080 EPA 8150
	GS-2 1.0-1.5					5109		<u>29367</u> EPA 8010
	GS-3 1.0-1.5					5110		<u>29368</u> EPA 8010
	GS-4 1.0-1.5					5111		<u>29369</u> EPA 8010
	GS-5 1.0-1.5				✓	5112	✓	<u>29370</u> EPA 8010

FIELD DISPOSITION:  
 IMMEDIATE DELIVERY   
 STORAGE  REFRIGERATOR  FREEZER  ID \_\_\_\_\_  
 SECURED  YES  NO

ALL THREE ANALYSES ON THESE FIVE SAMPLES

RELINQUISHED BY: H. Hirschfeld RECEIVED BY: \_\_\_\_\_ DATE/TIME: 7:15 8/15/89

RELINQUISHED BY: \_\_\_\_\_ RECEIVED BY: \_\_\_\_\_ DATE/TIME: \_\_\_\_\_

RECEIVED FOR LABORATORY BY: Reynolds Burton DATE/TIME: 8-16-89 10:00

METHOD OF SHIPMENT: FED EX

LABORATORY DISPOSITION: 8015 & 8080 samples sent out by analysis.  
 IMMEDIATE ANALYSIS  STORAGE  REFRIGERATOR  FREEZER  ID \_\_\_\_\_ SECURED  YES  NO  
24 HR RUSH

PRINT NAME AFTER SIGNATURE





APPENDIX D

PHASE II  
GRAB WATER SAMPLE ANALYTICAL RESULTS  
AND  
CHAIN-OF-CUSTODY RECORDS

VOLATILE ORGANICS  
MODIFIED EPA METHOD 624

Project: Kaufman & Broad San Leandro

Lab Project  
Number: 2121

Sample  
Location: Well #1 Water Tap

Lab ID  
Number: 29373

Sample  
Number: KB-G-01-03

Date  
Received: 08/16/89

Date  
Sampled: 08/15/89

Date  
Analyzed: 08/16/89

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/L (ppb)	<u>REPORTING LIMIT</u> ug/L (ppb)
Chloromethane	< 10	10.
Bromomethane	< 10	10.
Vinyl Chloride	< 10	10.
Chloroethane	< 10	10.
Methylene Chloride	< 25	25.
Acetone	< 25	25.
Carbon Disulfide	< 5	5.
1,1-Dichloroethene	< 5	5.
1,1-Dichloroethane	< 5	5.
1,2-Dichloroethene(cis/trans)	< 5	5.
Chloroform	< 5	5.
Freon 113	< 5	5.
1,2-Dichloroethane	< 5	5.
2-Butanone	< 25	25.
1,1,1-Trichloroethane	< 5	5.
Carbon Tetrachloride	< 5	5.
Bromodichloromethane	< 5	5.
1,2-Dichloropropane	< 5	5.
trans-1,3-Dichloropropene	< 5	5.
Trichloroethene	< 5	5.
Benzene	< 5	5.
1,1,2-Trichloroethane	< 5	5.
Dibromochloromethane	< 5	5.
cis-1,3-Dichloropropene	< 5	5.
Bromoform	< 5	5.
4-Methyl-2-Pentanone	< 25	25.
2-Hexanone	< 25	25.
1,1,2,2-Tetrachloroethane	< 5	5.
Tetrachloroethylene	< 10	10.



VOLATILE ORGANICS  
 MODIFIED EPA METHOD 624  
 (Continued)

Lab ID:  
 Number 29373

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/L (ppb)	<u>REPORTING LIMIT</u> ug/L (ppb)
Toluene	< 5	5.
Chlorobenzene	< 5	5.
Ethyl Benzene	< 5	5.
Styrene	< 5	5.
Total Xylenes	< 5	5.

GCMS 624 SURROGATE % RECOVERY

<u>COMPOUND NAME</u>	<u>% RECOVERY</u>	<u>RANGE</u>
S1 = 1,2-Dichloroethane-D4	99	76-114
S2 = Toluene-D8	101	88-110
S3 = 4-Bromofluorobenzene	103	86-115

Comments:

Analyst: K. Badal Reviewed By: J. Wensloff Date: 08/17/89

Laboratory Director: J. M. Bartell



VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 602 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

Project: Kaufman & Broad  
San Leandro

Lab Project  
 Number: 2121

Sample  
 Location: Well #1 Water Tap

Lab ID  
 Number: 29371

Sample  
 Number: KG-G-01-01

Date  
 Received: 08/16/89

Date  
 Sampled: 08/15/89

Date  
 Analyzed: 08/17/89

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/L (ppb)	<u>REPORTING LIMIT</u> ug/L (ppb)
Benzene	< 0.5	0.5
Toluene	< 0.5	0.5
Ethylbenzene	< 0.5	0.5
p-Xylene	< 0.5	0.5
m-Xylene	< 0.5	0.5
o-Xylene	< 0.5	0.5
Total Volatile Hydrocarbons	< 50	50.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	98%	

Comments:

Analyst: A. Putnam  
 A. Putnam

Reviewed By: S. Azimi Galloway  
 S. Azimi Galloway

Date: 08/21/89

Laboratory Director: J. M. Bartell  
 J. M. Bartell





ANALYTICAL LABORATORY

A DIVISION OF DEWANTE & STOWELL

1914 S STREET, SACRAMENTO, CALIFORNIA 95814 • 916-447-2946

Chlorinated Pesticides and PCB's  
Organic Priority Pollutants  
EPA #608

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 11 of 12  
Attn: Shakoora Azimi      Report #: 122559

Sample Description: B-6-01-02      Anlab ID#: 122559-6      Units: ug/l  
Well #1 Water Tap

Date Sample      Date Sample Rec'd.      Date Analysis  
Collected: 08/15/89      @ Lab: 08/16/89      Completed: 08/17/89

STORET #	COMPOUND	CONCENTRATION	MDL
39330	Aldrin.....	<0.01	0.01
39337	alpha-BHC.....	<0.01	0.01
39338	beta-BHC.....	<0.05	0.05
34259	delta-BHC.....	<0.05	0.05
39340	gamma-BHC.....	<0.01	0.01
39350	Chlordane.....	<0.05	0.05
39310	4,4'-DDD.....	<0.02	0.02
39320	4,4'-DDE.....	<0.01	0.01
39300	4,4'-DDT.....	<0.02	0.02
39380	Dieldrin.....	<0.05	0.05
39361	Endosulfan I.....	<0.01	0.01
34356	Endosulfan II.....	<0.01	0.01
39351	Endosulfan sulfate.....	<0.05	0.05
39390	Endrin.....	<0.01	0.01
34366	Endrin aldehyde.....	<0.05	0.05
39410	Heptachlor.....	<0.02	0.02
39420	Heptachlor epoxide.....	<0.1	0.1
39400	Toxaphene.....	<0.5	0.5
34671	PCB 1016.....	<0.2	0.2
39488	PCB 1221.....	<0.2	0.2
39492	PCB 1232.....	<0.2	0.2
39496	PCB 1242.....	<0.2	0.2
39500	PCB 1248.....	<0.2	0.2
39504	PCB 1254.....	<0.2	0.2
39508	PCB 1260.....	<0.2	0.2

Data Certified by Rebecca Torrey

Report Approved by Tom King

:slw

VOLATILE ORGANICS  
MODIFIED EPA METHOD 624

Project: Kaufman & Broad San Leandro

Lab Project  
Number: 2121

Sample  
Location: Well #2 13' Well

Lab ID  
Number: 29376

Sample  
Number: KB-G-02-06

Date  
Received: 08/16/89

Date  
Sampled: 08/15/89

Date  
Analyzed: 08/16/89

<u>COMPOUND</u>	<u>ANALYTE</u>	<u>REPORTING</u>
	<u>CONCENTRATION</u>	<u>LIMIT</u>
	ug/L	ug/L
	(ppb)	(ppb)
Chloromethane	< 10	10.
Bromomethane	< 10	10.
Vinyl Chloride	< 10	10.
Chloroethane	< 10	10.
Methylene Chloride	< 25	25.
Acetone	< 25	25.
Carbon Disulfide	< 5	5.
1,1-Dichloroethene	< 5	5.
1,1-Dichloroethane	< 5	5.
1,2-Dichloroethene(cis/trans)	< 5	5.
Chloroform	< 5	5.
Freon 113	< 5	5.
1,2-Dichloroethane	< 5	5.
2-Butanone	< 25	25.
1,1,1-Trichloroethane	< 5	5.
Carbon Tetrachloride	< 5	5.
Bromodichloromethane	< 5	5.
1,2-Dichloropropane	< 5	5.
trans-1,3-Dichloropropene	< 5	5.
Trichloroethene	< 5	5.
Benzene	< 5	5.
1,1,2-Trichloroethane	< 5	5.
Dibromochloromethane	< 5	5.
cis-1,3-Dichloropropene	< 5	5.
Bromoform	< 5	5.
4-Methyl-2-Pentanone	< 25	25.
2-Hexanone	< 25	25.
1,1,2,2-Tetrachloroethane	< 5	5.
Tetrachloroethylene	< 10	10.



VOLATILE ORGANICS  
 MODIFIED EPA METHOD 624  
 (Continued)

Lab ID:  
 Number 29376

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/L (ppb)	<u>REPORTING LIMIT</u> ug/L (ppb)
Toluene	< 5	5.
Chlorobenzene	< 5	5.
Ethyl Benzene	< 5	5.
Styrene	< 5	5.
Total Xylenes	< 5	5.

GCMS 624 SURROGATE % RECOVERY

<u>COMPOUND NAME</u>	<u>% RECOVERY</u>	<u>RANGE</u>
S1 = 1,2-Dichloroethane-D4	100	76-114
S2 = Toluene-D8	99	88-110
S3 = 4-Bromofluorobenzene	104	86-115

Comments:

Analyst: K. Badal Reviewed By: J. Wensloff Date: 08/17/89

Laboratory Director: J. M. Bartell



VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 602 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

Project: Kaufman & Broad  
San Leandro

Sample Location: Well #<sup>2</sup> 13' Well

Sample Number: KG-G-02-04

Date Sampled: 08/15/89

Lab Project Number: 2121

Lab ID Number: 29374

Date Received: 08/16/89

Date Analyzed: 08/17/89

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/L (ppb)	<u>REPORTING LIMIT</u> ug/L (ppb)
Benzene	< 0.5	0.5
Toluene	< 0.5	0.5
Ethylbenzene	< 0.5	0.5
p-Xylene	< 0.5	0.5
m-Xylene	< 0.5	0.5
o-Xylene	< 0.5	0.5
Total Volatile Hydrocarbons	< 50	50.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	95%	

Comments:

Analyst: A. Putnam Reviewed By: S. Azimi-Galloway Date: 08/21/89

Laboratory Director: J. M. Bartell







ANALYTICAL LABORATORY  
A DIVISION OF DEWANTE & STOWELL

1914 S STREET, SACRAMENTO, CALIFORNIA 95814 • 916-447-2946

Chlorinated Pesticides and PCB's  
Organic Priority Pollutants  
EPA #608

Client: MCLAREN ANALYTICAL LABORATORY      Report Date: 08/17/89      Page: 12 of 12  
Attn: Shakoora Azimi      Report #: 122559

Sample Description: B-6-02-05      Anlab ID#: 122559-7      Units: ug/l  
Well #2 13' Well

Date Sample      Date Sample Rec'd.      Date Analysis  
Collected: 08/15/89      @ Lab: 08/16/89      Completed: 08/17/89

STORET #	COMPOUND	CONCENTRATION	MDL
39330	Aldrin.....	<0.01	0.01
39337	alpha-BHC.....	<0.01	0.01
39338	beta-BHC.....	<0.05	0.05
34259	delta-BHC.....	<0.05	0.05
39340	gamma-BHC.....	<0.01	0.01
39350	Chlordane.....	<0.05	0.05
39310	4,4'-DDD.....	<0.02	0.02
39320	4,4'-DDE.....	<0.01	0.01
39300	4,4'-DDT.....	<0.02	0.02
39380	Dieldrin.....	<0.05	0.05
39361	Endosulfan I.....	<0.01	0.01
34356	Endosulfan II.....	<0.01	0.01
39351	Endosulfan sulfate.....	<0.05	0.05
39390	Endrin.....	<0.01	0.01
34366	Endrin aldehyde.....	<0.05	0.05
39410	Heptachlor.....	<0.02	0.02
39420	Heptachlor epoxide.....	<0.1	0.1
39400	Toxaphene.....	<0.5	0.5
34671	PCB 1016.....	<0.2	0.2
39488	PCB 1221.....	<0.2	0.2
39492	PCB 1232.....	<0.2	0.2
39496	PCB 1242.....	<0.2	0.2
39500	PCB 1248.....	<0.2	0.2
39504	PCB 1254.....	<0.2	0.2
39508	PCB 1260.....	<0.2	0.2

Data Certified by Kendra Torrey

Report Approved by Tom Kirby

:slw

# McLaren Analytical Laboratory

## Chain of Custody Record

L.P. 2/21  
No 210487

PROJECT DESIGNATION *Kell Farm & Broad San Leandro* SAMPLES TAKEN BY: *G. Hennis*

AREA	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE		SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED
				WATER	SOIL			
				COMPI	GRAB			
Well #1	Water Tap	8.15		X		#B-6-01-01 4	VOA's	Gas/BTEX (29371)
Well #1	Water Tap	8.15		X		#B-6-01-02 2	Ambers	#608 (29372)
Well #1	Water Tap	8.15		X		#B-6-01-03 4	VOA's	#624 (29373)

FIELD DISPOSITION:  
 IMMEDIATE DELIVERY   
 STORAGE  REFRIGERATOR  ID \_\_\_\_\_ SECURED  YES  
 FREEZER  ID \_\_\_\_\_  NO

RELINQUISHED BY: *Gary Hennis / Gary Hennis* RECEIVED BY: \_\_\_\_\_ DATE/TIME \_\_\_\_\_  
 RELINQUISHED BY: \_\_\_\_\_ RECEIVED BY: \_\_\_\_\_ DATE/TIME \_\_\_\_\_

RECEIVED FOR LABORATORY BY: *Agnes Benton* DATE/TIME *8-16-89 16:00*

METHOD OF SHIPMENT: \_\_\_\_\_

LABORATORY DISPOSITION:  
 IMMEDIATE ANALYSIS  STORAGE  REFRIGERATOR  ID *H* SECURED   
 FREEZER  ID \_\_\_\_\_ YES  
 CABINET  ID \_\_\_\_\_ NO

PRINT NAME AFTER SIGNATURE *\* 24 hour turnaround*  
 Send Results to Jean Hughes ASAP



# McLaren Analytical Laboratory

## Chain of Custody Record

L.P. 2121  
No 210488

PROJECT DESIGNATION *Kullman & Broad San Landfill* SAMPLES TAKEN BY: *G. Henris*

AREA	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE		SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED
				WATER COMP   GRAB	SOIL			
	Well #2.13' Well	8.15		X		KB-6-02-05 4	VOA'S	Gas/BTEX (29374)
	Well #2.12' Well	8.15		X		KB-6-02-05 2	Ambers	608 (29375)
	Well #2.13' Well	8.15		X		KB-6-02-05 4	VOA'S	624 (29376)

FIELD DISPOSITION:

IMMEDIATE DELIVERY   
 STORAGE  REFRIGERATOR  ID \_\_\_\_\_ SECURED  YES  
 FREEZER  ID \_\_\_\_\_  NO

RELINQUISHED BY: <i>Gary Henris / Gary Henris</i>	RECEIVED BY:	DATE/TIME
RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
RECEIVED FOR LABORATORY BY: <i>Cecilia Buxton</i>		DATE/TIME 8-16-89 10:00

METHOD OF SHIPMENT

LABORATORY DISPOSITION *\* one vial for BTEX/gas was broken*  
 IMMEDIATE ANALYSIS  STORAGE  REFRIGERATOR  ID 24 SECURED  
*\* 24 hour TAT* FREEZER  ID \_\_\_\_\_ YES NO  
 CABINET  ID \_\_\_\_\_

PRINT NAME AFTER SIGNATURE *Send results to Jean Hughes  
Call Jean Hughes with questions*



APPENDIX E  
PHASE III  
SOIL AND WATER ANALYTICAL DATA SHEETS  
AND  
CHAIN-OF-CUSTODY RECORDS

VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 8020 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

Project: <u>K &amp; B SL-2</u>	Lab Project Number: <u>2169</u>
Sample Location: <u>SB-5 14.5-15.0</u>	Lab ID Number: <u>30096</u>
Sample Number: <u>Tank 5113</u>	Date Received: <u>09/01/89</u>
Date Sampled: <u>08/31/89</u>	Date Analyzed: <u>09/06/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/g (ppm)	<u>REPORTING LIMIT</u> ug/g (ppm)
Benzene	< 0.02	0.02
Toluene	< 0.02	0.02
Ethylbenzene	< 0.02	0.02
p-Xylene	< 0.02	0.02
m-Xylene	< 0.02	0.02
o-Xylene	< 0.02	0.02
 Total Volatile Hydrocarbons	 < 1	 1.
 Surrogate recovery (percent) a,a,a-Trifluorotoluene	  122%	

Comments:

Analyst: S. Pedersen Reviewed By: A. Putnam Date: 09/09/89

Laboratory Director: J. M. Bartell



VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 8020 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

Project: K & B SL-2  
 Sample SB-6  
 Location: 9.5-10.0  
 Sample Number: Garage 5117  
 Date Sampled: 08/31/89

Lab Project Number: 2169  
 Lab ID Number: 30093  
 Date Received: 09/01/89  
 Date Analyzed: 09/06/89

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/g (ppm)	<u>REPORTING LIMIT</u> ug/g (ppm)
Benzene	< 0.02	0.02
Toluene	< 0.02	0.02
Ethylbenzene	< 0.02	0.02
p-Xylene	< 0.02	0.02
m-Xylene	< 0.02	0.02
o-Xylene	< 0.02	0.02
Total Volatile Hydrocarbons	< 1	1.
Surrogate recovery (percent) a, a, a-Trifluorotoluene	102%	

Comments:

Analyst: S. Pedersen Reviewed By: A. Putnam Date: 09/09/89

Laboratory Director: J. M. Bartell



VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 8020 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2169</u>
Sample Location: <u>South of Tank SB-5</u>	Lab ID Number: <u>30094</u>
Sample Number: <u>119144-47</u>	Date Received: <u>09/01/89</u>
Date Sampled: <u>08/31/89</u>	Date Analyzed: <u>09/01/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/L (ppb)	<u>REPORTING LIMIT</u> ug/L (ppb)
Benzene	4.5	0.5
Toluene	< 0.5	0.5
Ethylbenzene	< 0.5	0.5
p-Xylene	9.9	0.5
m-Xylene	0.8	0.5
o-Xylene	< 0.5	0.5
 Total Volatile Hydrocarbons	 290.	 50.
 Surrogate recovery (percent) a,a,a-Trifluorotoluene	  87%	

Comments:

Analyst: A. Putnam Reviewed By: S. Azimi-Galloway Date: 09/14/89

Laboratory Director: J. M. Bartell



VOLATILE AROMATIC COMPOUNDS  
 MODIFIED EPA METHOD 8020 (BTEX)  
 AND  
 TOTAL VOLATILE HYDROCARBONS

Project: <u>K&amp;B SL-2</u>	Lab Project Number: <u>2169</u>
Sample Location: <u>Garage SB-6</u>	Lab ID Number: <u>30095</u>
Sample Number: <u>119148-50, 43</u>	Date Received: <u>09/01/89</u>
Date Sampled: <u>08/31/89</u>	Date Analyzed: <u>09/01/89</u>

<u>COMPOUND</u>	<u>ANALYTE CONCENTRATION</u> ug/L (ppb)	<u>REPORTING LIMIT</u> ug/L (ppb)
Benzene	1.6	0.5
Toluene	< 0.5	0.5
Ethylbenzene	< 0.5	0.5
p-Xylene	< 0.5	0.5
m-Xylene	< 0.5	0.5
o-Xylene	< 0.5	0.5
Total Volatile Hydrocarbons	< 50	50.
Surrogate recovery (percent)		
a,a,a-Trifluorotoluene	100%	

Comments: A large unidentified peak seen on chromatogram.

Analyst: A. Putnam Reviewed By: S. Azimi-Galloway Date: 09/14/89

Laboratory Director: J. M. Bartell





# McLaren Analytical Laboratory

## Chain of Custody Record

L.P. ~~2170~~ <sup>2169</sup> <sub>REV.</sub>  
 No 211302

24 HR RUSH - RESULTS DUE TUESDAY (9/5) MORNING  
 HERB HIRSCHFELD

PROJECT DESIGNATION K&B SL-2 SAMPLES TAKEN BY: [Signature]

AREA	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE		SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED
				WATER COMP   GRAB	SOIL			
POK	SB-5 14.5-15.0	8/31/89			X	5113	BEALS TUBE	GAS/BTEX / DHS-LUF <sup>30096</sup>
JARAGE	SB-6 9.5-10.0	8/31/89			X	5117	✓	✓ 30093
<sup>SOIL</sup> TANK	SB-5	8/31/89			X	119144	VOA	GAS/BTEX / DHS-LUF
	↓					119145	✓	SPARE 30094
						119146		SPARE
	↓					119147		SPARE
JARAGE	SB-6					119148		GAS/BTEX / DHS-LUF
	↓					119149		SPARE 30095
	↓					119150		SPARE
	↓	✓			✓	119043	✓	SPARE

FIELD DISPOSITION:

IMMEDIATE DELIVERY  NO FILE  
 STORAGE  REFRIGERATOR  ID \_\_\_\_\_ SECURED  YES  
 FREEZER  ID \_\_\_\_\_  NO

RELINQUISHED BY: [Signature] HIRSCHFELD RECEIVED BY: \_\_\_\_\_ DATE/TIME: 6:00 8/31/89  
 RELINQUISHED BY: \_\_\_\_\_ RECEIVED BY: \_\_\_\_\_ DATE/TIME: \_\_\_\_\_

RECEIVED FOR LABORATORY BY: [Signature] Cooper Buxton DATE/TIME: 9-1-89 10:00

METHOD OF SHIPMENT: FED EX

LABORATORY DISPOSITION  
 IMMEDIATE ANALYSIS  STORAGE  REFRIGERATOR  ID 3-6 SECURED    
 FREEZER  ID \_\_\_\_\_ YES NO  
 CABINET  ID \_\_\_\_\_

24 HR RUSH

\* PRINT NAME AFTER SIGNATURE