

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

December 9, 1991
718-9E, MV120902

ALAMEDA COUNTY HEALTH DEPARTMENT
80 Swan Way
Suite 200
Oakland, California 94612

RE: 32-ACRE HAYWARD PARCEL
HAYWARD, CALIFORNIA

Attention: Ms. Pam Evans

Ladies & Gentlemen:

Per your request, attached is our September 19, 1991 draft report entitled, "Ground Water and Soil Quality Reconnaissance, Two Hayward Parcels, Hayward, California". We will begin field work to characterize the on-site slag the week of December 9, 1991.

If you have any questions, please call. We look forward to working with you on this interesting project.

Very Truly Yours,

LOWNEY ASSOCIATES


Ron L. Helm

Attachments: Report

91 DEC 16 11 08 10

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

September 19, 1991
30-718-9B, MV052805

AM HOMES
577 Salmar Ave.
Campbell, California 95008

RE: **GROUND WATER AND SOIL
QUALITY RECONNAISSANCE,
TWO HAYWARD PARCELS,
HAYWARD, CALIFORNIA**

Attention: Mr. Steve Delva

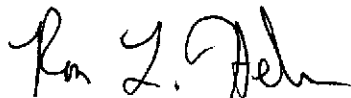
Gentlemen:

In accordance with your request, we have performed a ground water and soil quality reconnaissance investigation for the referenced project. The accompanying draft report presents the results of our investigation. The scope of work performed was discussed with you and described in our letters dated June 19, August 20, September 20, and November 7, 1990, and April 23, 1991.

We refer you to the text of the report for results and conclusions. If you have any questions, please call.

Very truly yours,

LOWNEY ASSOCIATES



Ron L. Helm



Glenn A. Romig

GAR:RLH:PMLe

Copies: Addressee (1)
Heller, Ehrman, White & McAuliffe (1)
Attn: Mr. Tom Donnelly

**GROUND WATER AND SOIL QUALITY
RECONNAISSANCE FOR
TWO HAYWARD PARCELS,
HAYWARD, CALIFORNIA**

LOWNEY ASSOCIATES
ENVIRONMENTAL/GEOTECHNICAL/ENGINEERING SERVICES

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GROUND WATER AND SOIL QUALITY RECONNAISSANCE

For

TWO HAYWARD PARCELS,
Hayward, California

To

AM HOMES
577 Salmar Avenue
Campbell, California 95008

July 1991

DRAFT

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Letter of transmittal

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DRAFT

**GROUND WATER AND SOIL QUALITY
RECONNAISSANCE FOR
TWO HAYWARD PARCELS
HAYWARD, CALIFORNIA**

1.0 INTRODUCTION

In this report we present the results of our ground water and soil quality reconnaissance at the referenced site, located on Hesperian Boulevard, adjacent to Alameda Creek in Hayward, California. Our investigation includes the analyses of selected ground water, surface water, and soil samples.

At the time of our investigation, the site consisted of 7-acre and 32-acre parcels bordered to the east and south by Alameda Creek flood control channel levees, to the west by Hesperian Boulevard, and to the north by industrial and commercial developments. The site was reportedly used for agricultural purposes until 1959 and left fallow until 1970, when a drive-in movie theater was constructed on the eastern portion of the site. Currently both parcels are unoccupied and the drive-in theater has been removed.

The Phase I studies conducted by Earth Metrics, Incorporated and Harding Lawson Associates on May 15, 1987 and October 12, 1989, respectively, identified some areas of potential concern on the two parcels.

Site visits conducted by Earth Metrics in 1987 revealed that the eastern portion of the 32-acre site contained remnants of the abandoned drive-in including: two elevated screens, paved driveways,

1.1 Purpose

1.2 Project Description

1.3 Previous Investigations

concrete slabs, metal posts, and graded car ramps. Household trash, including appliances, mattresses, and newspapers had been dumped along the access road and in former drive-in parking areas. Ponding was observed on-site in May 1987. The undeveloped western portion of the site was covered with numerous mounds consisting of concrete fragments, asphaltic materials, and slag fragments. Dense vegetation covered sections of this area.

Two site visits were conducted by Harding Lawson Associates in September 1989. The screens, paved driveways, concrete slabs, and metal posts had been removed from the drive-in portion of the site. Several mounds of household trash were noted on the eastern (drive-in) portion of the site. The western undeveloped portion of the site contained mounds of debris consisting of soil, concrete fragments, asphalt, and paving rubble. Several small containers of hazardous materials were observed along the northeastern border of the site, including one 5-gallon metal container of methyl ethyl ketone, five 5-gallon plastic containers of unknown material, seven 5-gallon carboys of used oil, one 10-ounce fiber container of malathion, one 24-ounce fiber container of pesticide, and three 10-ounce glass containers of pesticide. The exact locations of these containers of hazardous materials were not specified in the report, except that they were located along the northeast border of the site. No evidence of leakage was observed and these materials were reportedly removed from the site by September 20, 1989.

A double trailer rig, converted to an office building, was located on the 7-acre site. Several containers of flammable hazardous materials were stored in this

structure. In addition, three 55-gallon steel drums containing unknown liquids were present. No evidence of leaks or spills was reportedly observed. These materials were reportedly removed from the site by September 20, 1989.

Harding Lawson Associates installed five well points on November 16, 1989 along the northeast boundary of the site, in the vicinity where various containers of hazardous materials were reportedly observed. Well points are not "permanent" wells and likely consisted of collecting a "grab" sample of the ground water by a hydropunch sampler. After the sample is collected, the boring is grouted. Ground water was analyzed for TPH gas and diesel, motor oil, benzene, ethylbenzene, toluene, and xylenes. TPH diesel concentrations were below the detection limit (0.05 parts per million or ppm) for all five well points. TPH gas concentrations ranged from 0.08 to 0.15 ppm and motor oil concentrations ranged from 2.1 to 54 ppm. Benzene was detected in one well point (3.8 parts per billion or ppb), ethylbenzene was detected in three well points (1.1 to 2.7 ppb), toluene was detected in four well points (2.1 to 30 ppb), and xylenes were detected in two well points (9 to 13 ppb). In addition, a slight sheen reportedly was observed on ground water in two of the well points.

The scope of work performed for this investigation included the following:

- Site reconnaissance.
- Aerial photograph review at the United States Geological Survey (USGS) and Pacific Aerial Survey.

1.4 Scope of Work

- Environmental questionnaires were sent to AM Homes to be filled out by current and previous owner(s) of the site.
- Drilling of five exploratory borings into the uppermost water-bearing stratum and installation of five "permanent" monitoring wells; collection and analysis of selected soil and ground water samples.
- Seventeen exploratory borings were advanced to three feet and fifteen borings to four feet; collection and analysis of selected soil samples.
- Drilling of one hydropunch boring and collection and chemical analysis of ground water; three additional hydropunch borings were drilled, but did not produce ground water.
- Surface water samples were collected and analyzed.
- Review of previous reports, evaluation of analytical data and preparation of this report.

This study was conducted under the direction and review of Glenn A. Romig, P.E., Principal Engineer, Registered Environmental Assessor. Associate Geologist and Registered Environmental Assessor, Ron Helm, supervised the field and office phases of the investigation. Staff Hydrogeologist, Peter Leffler, and staff Environmental Engineer, Stason Foster, assisted in the field and office phases of the investigation.

2.0 SITE OBSERVATION

On July 5 and 6, 1990, our representative walked the site and looked for signs of underground and above ground storage tanks, sumps, transformers, stains, debris, and other materials indicative of a release of hazardous materials. No evidence of chemical usage, storage, disposal, and/or spills was observed on-site.

The generally level site contained numerous mounds of trash on the drive-in portion of the 32-acre site, primarily consisting of scrap metal, household appliances, mattresses, wood, an abandoned car, plastic, and rubber. The surface gravel fill layer across the drive-in contained numerous fragments of smelting, asphalt chips, and slag. Slag is generally produced as a by-product in metal foundry or refining operations. It was commonly used as granular fill material prior to the 1970's. **An area of ponding and associated white stains in low areas were observed on the portion of the drive-in bordering the undeveloped portion of the site.**

The undeveloped portion of the site contained several piles of debris consisting of root fragments, concrete blocks, concrete pipes, asphalt, and slag. Several mounds of soil were also observed on the site. The soil had been plowed and stripped of vegetation over approximately half the area. Subsequent site visits in April-May 1991 revealed that vegetation consisting of tall grass, thistle, and other weeds had grown over a large portion of this area.

An abandoned outhouse, car, truck, trailer, broken glass, and scrap metal were observed on the 7-acre site. A small burned, corrugated sheet metal building was also observed. In addition,

2.1 Site Conditions

approximately five empty 55 gallon barrels were observed, and the site was covered with deteriorating asphalt.

Aerial photographs of the vicinity were reviewed during this reconnaissance study. The photographs were flown for the United States Department of the Interior and Pacific Aerial Survey between 1958 and 1990. Table 1 below references the aerial photographs reviewed.

2.2 Aerial Photographs Review

TABLE 1. Aerial Photographs Reviewed,
Two Hayward Parcels,
Hayward, California

<u>Date Taken</u>	<u>Reference Number</u>	<u>Scale</u>
July 21, 1958	GS-VUO 1-83; single	1:20,000
July 7, 1960	GS-VACY 1-64; single	1:15,000
May 14, 1965	ALA 5-48,49; stereo pair	1:12,000
May 16, 1966	BUT-3GG-65,66; stereo pair	1:20,000
October 14, 1974	13-24, 25; color stereo pair	1:20,000
September 6, 1979	AV 1750-06-49,51; stereo pair	1:12,000
October 28, 1980	GS-VEZR 1-117,118; stereo pair	1:24,000
June 22, 1981	AV-2040-06046,47; stereo pair	1:12,000
June 21, 1983	AV-2300-06-46,47; stereo pair	1:12,000
May 15, 1985	AV-2640-06-47,48; stereo pair	1:12,000
March 30, 1988	AV-3268-6-49,50; stereo pair	1:12,000
July 17, 1990	ALA AV-3845-16-45,46; stereo pair	1:12,000

The aerial photographs from 1958 and 1960 showed the project site and general vicinity as agricultural land planted with row crops on-site. No sheds, drums, or discolored areas of soil were noted on or near the project site.

The 1965 and 1966 photos showed the majority of the 32-acre parcel as agricultural land. A dirt road near Alameda Creek led from Hesperian Boulevard to the far eastern corner of the site. The eastern corner of the site was cleared of vegetation and consisted of a dirt lot with one structure that

appeared to be a pump station on the creek bank. Industrial buildings were present well to the east and south of the site. Housing developments were located well to the north of the site.

In the 1965 and 1966 photos, the 7-acre parcel was mostly bare of vegetation except around the property boundaries, which appeared raised relative to the surrounding area. In our opinion, fill had been brought into these areas. A dirt road on the property leads from Hesperian Boulevard to the center of the site. The property was a vacant, dirt lot at this time.

The 1974 photo showed that two drive-in movie theaters had been constructed on the eastern portion of the 32-acre parcel. Two projection screens were present and parking areas were graded in a semi-circular pattern surrounding each screen. No discolored areas or drums were observed on the drive-in portion of the site. The western portion of the 32-acre site was undeveloped but appeared to contain supplies and debris piles from the construction of the drive-in. Vegetation was present on the western portion of the site. The properties bordering the project site were primarily agricultural or vacant. However, some industrial buildings had been constructed on the property bordering northeast of the site.

In 1974, the 7-acre parcel was apparently being used as a construction service yard. Cars and trucks were parked on the lot, and a small building structure was located on-site. No discolored areas were observed.

The 1979 aerial photograph showed the drive-in in similar condition as in the 1974 photo. However,

what appeared to be storage barrels or drums may have been located on the adjacent property just north of the northeast boundary of the project site.

The 1980 photo showed the drive-in theater in a similar condition as in 1979. The western portion of the site was still undeveloped. The 7-acre parcel still had the small building structure on it, and also several piles of dirt or debris. The area west of the project site was agricultural; industrial buildings were located north and south of the site; and undeveloped land existed to the east of the site.

The 1981 and 1983 photographs showed the site in a similar condition as in 1979 and 1980 with the notable exception that a large area of ponding was observed in the middle of the property. This ponding area was on the parking area for one of the theaters in the same location where ponding was observed in July 1990. White stained areas, likely due to ponding of water in low areas, were noted on drive-in parking areas against the general gray background of the majority of the parking area. No barrels were observed on-site, although it would be difficult to identify barrels at the scale of these photos.

The 1985 photo showed the drive-in in deteriorating condition. Ponding and white stained areas were still present, along with numerous piles of trash. The main projection house was torn down and only the foundation was present.

The 1988 and 1990 photos showed the site in gradually deteriorating condition. The second projection house had been removed by 1988. The



trash piles had been pushed into rows and the screens were removed by 1990.

Two environmental questionnaires were sent to AM Homes, one for the current owner to fill out and one to be delivered to the previous site owner(s), if possible. The questionnaire to the current owner was filled out and returned to us, and a copy is presented in Appendix G. The questionnaire to the previous owner was not returned to us.

The returned questionnaire indicates that the 32-acre former drive-in site is currently owned by Filare Partners, which is a joint corporation consisting of Charles Davidson, Ken Earp, and AM Homes; who have owned the site since 1988. They did not report any knowledge of spraying or dust control operations performed during the operation of the former drive-in on the site, or storage/use of hazardous materials on-site since the property purchase in 1988.

3.0 SITE INVESTIGATION

To investigate near surface soil and shallow ground water quality, ~~thirty-seven~~ exploratory borings were advanced in July and October 1990, and May 1991. The initial field investigation was completed in July 1990. The second phase of the field investigation was completed in October 1990. A review of the results and consideration of remedial alternatives was subsequently performed. Based on our conclusions, a third phase of field work was performed and completed in May 1991. Boring depths ranged from 3.0 to 26.5 feet. All exploratory borings were located within the boundaries of the site. Soil samples were obtained using split spoon or Modified

2.3 Environmental Questionnaires

3.1 Exploratory Borings

California-type samplers which had been thoroughly cleaned with tri-sodium phosphate (TSP) and rinsed with distilled water or steam cleaned.

Soil borings, EB-1 through EB-5, were located in areas where petroleum hydrocarbons might be expected due to leaking motor oil, oil sprayed on roads, or leaky 55-gallon drums.

Samples EB-1, 2, and 3 were collected in low lying, white stained areas where surface water ponding apparently occurred during the rainy season. If hazardous materials were released on the site's surface, surface overrun would likely transport low levels of these materials toward these low lying areas.

Samples EB-4 and 5 were collected near the empty, rusted, 55-gallon drums stored on each side of the structure that reportedly contained flammable hazardous materials. *trailer*

Soil borings SS-1 through SS-15 were located in a grid pattern to provide random coverage of the entire site. However, six borings were located near the northeastern border of the site where Harding Lawson Associates had previously noted small containers of hazardous materials. In addition, one boring (SS-3) was located in the area where extensive amounts of slag were observed.

Soil borings, HS-1 through HS-12, were located where elevated lead and oil were previously detected. This work was performed to help evaluate the type of oil present and the source of the lead.

Five of the exploratory borings drilled on July 5 and 6, 1990 were converted to "permanent" ground water monitoring wells in accordance with Alameda County Flood Control and Water Conservation District guidelines. The locations of the monitoring wells were selected based upon the following considerations: (1) to provide coverage of the entire site; (2) to detect contaminants flowing to the site from off-site sources, (3) to evaluate possible oil releases associated with the asphalt pile (AF-4) and (4) to evaluate the northeastern border of site where hazardous materials were reportedly stored and near Harding Lawson's temporary well point locations (AF-1 and AF-2).

The borings were advanced using steam-cleaned, 8-inch diameter, hollow-stem augers and were logged by our environmental geologist. Logs of our borings and details regarding our field investigation are included in Appendix B. Permits and well construction details are presented in Appendix A and C, respectively.

The wells were terminated at depths ranging from 11.5 to 26.5 feet. At the time of drilling, ground water was encountered at depths ranging from 7 to 18 feet below grade in the borings; ground water was measured at depths ranging from 6.08 to 11.01 feet below grade approximately five days following drilling.

To provide additional information on ground quality beneath the site and to further evaluate the northeastern portion of the site, on October 3, 1990, one hydropunch ground water sample was obtained at the location shown on the Site Plan, Figure 2. Three other attempts were made to obtain additional

3.2 Installation of Monitoring Wells

*screening
strength/depth?*

3.3 Hydropunch Samples

hydropunch samples, but the uppermost aquifer did not produce high enough volumes of ground water to facilitate sampling or analysis.

The project site is located at the eastern boundary of the Bay Plain physiographic province near the San Leandro and Niles Cones. The sediments underlying the site are Quaternary alluvial deposits derived from Mesozoic marine sediments and intrusives and Pleistocene volcanics of the Diablo Range. The sediments are composed of unconsolidated gravel, sand, silt, and clay deposits. These sediments were deposited as alluvial fans by streams draining the highlands.

Underlying the Quaternary alluvium is the Santa Clara Formation of Plio-Pleistocene age. It consists of unconsolidated to semi-consolidated continental deposits of gravel, sand, silt, and clay. The combined thickness of the Santa Clara Formation and the Quaternary alluvium in the site area is approximately 500 feet. The Santa Clara Formation is underlain by non-water-bearing bedrock generally composed of Jurassic to Pliocene marine sediments, serpentine, quartz diorite, and rhyolite.

The site is located approximately 3 miles southwest of the Hayward fault, a regional, right lateral, strike-slip fault trending northwest-southeast. The valley floor slopes gently in this area toward San Francisco Bay, located approximately 3.5 miles to the west-southwest (California Department of Water Resources, 1967).

3.4 Geology

Based on the findings of our subsurface exploration program, the soils at the site can be roughly grouped into five strata as described below.

3.5 Subsurface Materials

Stratum Af: (Fill) Sandy Gravel (GP), Gravelly Clay (CL), and Silty Sand (SM).

Stratum Af consists of gray, well graded, sandy gravel (GP); gray, well graded gravelly clay (CL); and red-brown, well graded, silty sand (SM). This stratum extends from the surface to a depth of 3.0 feet in boring AF-2, from the surface to a depth of 2.0 feet in boring AF-5, and was not present in borings AF-1, AF-3, and AF-4. Water contents ranged from 2 to 16 percent.

Stratum A: Silty Clay (CL,CH), Sandy Clay (CL,CH), Clayey Sand (SC), and Clayey Silt (ML).

Stratum A consists of brown, gray, and black, soft to very stiff, low to high plasticity, silty clay (CL, CH); brown to gray, stiff to very stiff, low to high plasticity, sandy clay (CL,CH); brown, well graded, clayey sand (SC); and black, firm, low to moderate plasticity clayey silt (ML). This stratum was encountered from the surface or below Stratum Af to a maximum depth of 19 feet. Water contents ranged from 5 to 42 percent.

Stratum B: Sand (SW, SP), and Clayey Sand (SC).

Stratum B consists of brown, loose, well graded and poorly graded, sand (SW,SP); and brown, stiff to medium dense, well graded, clayey sand (SC). This stratum was encountered in all borings except AF-2 from 8 to 19 feet to the maximum depth explored of 25 feet. Water contents ranged from 15 to 23 percent.

Stratum C: Silty Clay (CL/CH), Sandy Clay (CL,CL/CH), and clay (CH).

Stratum C consists of brown, moderate plasticity, silty clay (CL/CH); brown, low to moderate plasticity, firm to very stiff, sandy clay (CL); and gray, high plasticity, firm to stiff, clay (CH). This stratum was encountered in all borings, except AF-2, from the 9 to 25 foot depth to the maximum depth explored. Water contents ranged from 23 to 42 percent.

Stratum D: Clayey Sand (SC) and silt (ML).

Stratum D consists of brown, well graded, loose, clayey sand (SC); and brown, low plasticity, firm silt. This stratum was encountered in boring AF-1 between 24.5 and 25.0 feet, and in boring AF-4 between 23.5 to 24.0 feet. Water contents ranged from 26 to 28 percent.

The project site is located along the northern boundary of the Niles subarea of the Fremont Ground Water Area. Shallow ground water is contained in sand and clayey sand lenses interbedded with deposits of silty clay and silt. Shallow ground water at the site is generally contained in semi-confined to confined aquifers ranging in depth from approximately 7 to 25 feet below ground surface. Ground water at depth in this area is generally confined within a series of flat-lying gravel aquifers separated by relatively low permeability clay aquicludes. The Newark aquifer, lying directly beneath the Newark aquiclude, is the shallow "potable aquifer" and is present at depths ranging from 60 to 140 feet below ground surface. The thicker clay deposits beneath the site act as partial barriers to the vertical movement of ground water from one aquifer to another (California Department of Water Resources, 1967). The City of Hayward

3.6 Regional Hydrogeology

does not use any ground water for drinking water purposes. However, a 320 foot deep water well, located near the intersection of Industrial and Hesperian approximately 1/4 mile northwest of the project site, is reportedly used for construction purposes (City of Hayward Water Department, 1991).

The regional ground water flow is towards the San Francisco Bay to the west-southwest. The closest surface water is Alameda Creek, forming the south-southeast boundary of the site. Alameda Creek provides the primary source of surface recharge to the alluvium east of the Hayward fault (California Department of Water Resources; 1967).

Stabilized ground water levels ranged from 6.0 to 11.0 feet below present grades on July 5, 1990 and are presented in Table 2, below. Please be cautioned, however, that fluctuations in the level of the ground water have occurred, and may continue to occur, as shown in Table 2, due to variations in rainfall and other factors not in evidence at the time measurements were made.

3.7 Ground Water Elevations

[Faint, illegible text or signature]

TABLE 2. Ground Water Elevations.
Two Hayward Parcels.
Hayward, California
(relative elevation/feet)

Date Measured	Monitoring Well	Initial Depth to Ground Water Below Present Grade (feet)	Static Depth to Ground Water Below Present Grade (feet)	Static Depth to Ground Water Below Top of Casing (feet)	Relative* Ground Water Elevation (feet)
7/5/90	AF-1	18.0	11.0	---	---
7/11/90			11.01	13.89	-5.72
7/26/90			11.14	14.02	-5.85
9/7/90			11.39	14.27	-6.10
10/4/90			11.46	14.34	-6.17
7/5/90	AF-2	14.0	6.0	---	---
7/11/90			6.17	9.07	-4.50
7/26/90			6.25	9.15	-4.58
9/7/90			6.26	9.55	-4.59
10/4/90			6.88	9.78	-5.21
7/5/90	AF-3	15.0	7.5	---	---
7/11/90			7.75	8.21	-5.11
7/26/90			7.83	8.29	-5.19
9/7/90			8.06	8.52	-5.42
10/4/90			8.11	8.57	-5.47
7/5/90	AF-4	17.0	6.0	---	---
7/11/90			6.08	8.98	-4.10
7/26/90			6.10	9.00	-4.12
9/7/90			6.32	9.22	-4.34
10/4/90			6.41	9.31	-4.43
7/5/90	AF-5	17.5	6.5	---	---
7/11/90			6.53	9.52	-2.02
7/26/90			6.91	9.90	-2.40
9/7/90			7.48	10.47	-2.97
10/4/90			7.76	10.75	-3.25

* Wells surveyed to a relative elevation of 7.5 feet at top of casing for monitoring well AF-5

Ground water levels measured in wells AF-1, AF-2, AF-3, and AF-4 on July 26, 1990 revealed the site ground water flow direction to be to the north. This direction is in contrast to the regional flow direction of west-southwest. This difference may be caused by natural variations in ground water flow directions or by ground water extraction in the vicinity. In our opinion, well AF-5 is likely in a perched ground water zone and was not used to determine ground water flow direction. The average linear velocity of ground water movement below the site may be established using Darcy's Law with knowledge of soil hydraulic

3.8 Ground Water Flow

conductivity, porosity, and the hydraulic gradient. The hydraulic gradient across the site during July 1990 was measured to range from 0.0015 to 0.0030 based on the ground water level readings measured in the surveyed monitoring wells. Average soil hydraulic conductivity beneath the site was estimated from correlations from several sources based on the soil samples obtained from the borings and our experience.

The average linear velocity for the sand and clayey sand water bearing strata encountered at the site was estimated at 1 to 80 feet per year. As the above is based on average values of soil hydraulic conductivity, we expect that at many locations ground water movement will actually be much faster or slower than stated above, corresponding to natural variations in permeability expected in soil deposits of this type and variations in the hydraulic gradient. In a study such as this, with soil permeability estimated from correlations based on visual classification of a limited number of soil samples, and not from in-situ permeability and/or pump test data, an average permeability value may only be considered approximate. Estimations of soil permeability are often in error by a factor of 10 or more. This is also true of ground water velocity based on estimated permeability values.

4.0 RESULTS

Detailed laboratory procedures are discussed in Appendix E. The laboratory analysis of the ground water and soil samples was performed by Sequoia Analytical Laboratory, a certified CDHS lab for the analyses performed in this investigation.

4.1 Laboratory Procedures

The complete results of the chemical analyses performed on the soil samples are shown in Appendix E and are summarized in Tables 3 through 6.

4.2 Soil Quality Analysis and Results

The July 1990 sampling consisted of analysis of 15 near surface samples for gasoline, oil and grease, benzene, toluene, ethylbenzene, and xylene. The analytical results are shown in Table 3.

4.2.1 Petroleum Hydrocarbon Analysis

TABLE 3. Laboratory Analysis of Near Surface Soil Samples
July 5 and 6,
Two Hayward Parcels,
Hayward, California
(concentrations in ppm)

Identified

Sample, Depth (feet)	Total Oil and Grease	TPH Gas	Benzene	Toluene	Ethylbenzene	Xylene
<u>Designated Level to Protect Ground Water¹</u>	N/A	N/A	0.7	100	680	620
AF-1, 0.5-1.0	<30	<1.0	0.0065	<0.0050	<0.0050	0.0083
AF-1, 4.5-5.0	<30	<1.0	0.0091	<0.0050	<0.0050	0.0065
AF-2, 0.5-1.0	700	<1.0	<0.0050	0.0023	<0.0050	0.012
AF-2, 4.5-5.0	<30	<1.0	0.0062	0.0054	<0.0050	0.0054
AF-3, 0.5-1.0	<30	<1.0	0.0083	<0.0050	<0.0050	0.0069
AF-3, 4.5-5.0	<30	<1.0	0.0062	<0.0050	<0.0050	<0.0050
AF-4, 0.5-1.0	6,800	<1.0	<0.0050	0.0060	<0.0050	0.024
AF-4, 4.5-5.0	<30	<1.0	<0.0050	<0.0050	<0.0050	0.0056
AF-5, 0.5-1.0	6,800	<1.0	<0.0050	0.011	<0.0050	0.016
AF-5, 4.5-5.0	<30	<1.0	<0.0050	0.0061	<0.0050	0.0058
EB-1, 0.5-1.0	1,400	<1.0	<0.0050	1.3	0.014	0.0054
EB-2, 0.5-1.0	2,500	<1.0	0.014	0.013	<0.0050	0.0083
EB-3, 0.5-1.0	210	<1.0	<0.0050	0.0070	<0.0050	0.0059
EB-4, 0.5-1.0	<30	<1.0	<0.0050	0.0053	<0.0050	0.0065
EB-5, 0.5-1.0	80	<1.0	<0.0050	<0.0050	<0.0050	<0.0050

1. "Water Quality Goals and Hazardous and Designated Levels for Chemical Constituents", California Regional Water Quality Control Board, Central Valley Region, September 1986

To further characterize near-surface soil quality, twenty-seven soil borings were advanced to depths of three to four feet in October 1990 and May 1991. The analytical results are presented in Table 4.

TABLE 4. Laboratory Analysis of Soil Samples for Total Oil & Grease,
Soluble Oil & Grease, and pH,
October 3, 1990 and May 1, 1991,
Two Hayward Parcels,
Hayward, California
(concentrations in ppm)

No BTEX

Sample	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0
SS-1 Total Oil & Grease	390	180	<30					
SS-2 Total Oil & Grease	2,700	3,400	5,200	100	<30	<30	<30	190
SS-3 Total Oil & Grease	<30	380	460	<30	49	300		
SS-4 Total Oil & Grease	210	90	<30					
SS-5 Total Oil & Grease	120	<30	<30					
SS-6 Total Oil & Grease	260	40	<30					
SS-7 Total Oil & Grease	340	<30	<30					
SS-8 Total Oil & Grease	2,600	250	<30					
SS-9 Total Oil & Grease	1,700	980	360	<30	<30	<30	<30	<30
SS-10 Total Oil & Grease	1,300	<30	<30					
SS-11 Total Oil & Grease	<30	<30	<30					
SS-12 Total Oil & Grease	620	250	<30					
SS-13 Total Oil & Grease	4,000	260	<30					

TABLE 4. Laboratory Analysis of Soil Samples for Total Oil & Grease,
Soluble Oil & Grease, and pH,
October 3, 1990 and May 1, 1991,
Two Hayward Parcels,
Hayward, California
(concentrations in ppm)
(continued)

Sample	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0
SS-14								
Total Oil & Grease	67	<30	<30					
SS-15								
Total Oil & Grease	<30	<30	<30					
HS-4								
Total Oil & Grease		130						
Soluble Oil & Grease*		<5						
pH		8.8						
HS-5								
Total Oil & Grease		780						
Soluble Oil & Grease*		<5						
pH		8.4						
HS-9								
Total Oil & Grease		370						
Soluble Oil & Grease*		<5						
pH		12						
HS-10								
Total Oil & Grease		41						
Soluble Oil & Grease*		<5						
pH		9.6						
HS-11								
Total Oil & Grease		<30						
Soluble Oil & Grease*		---						
pH		10						
HS-12								
Total Oil & Grease		260						
Soluble Oil & Grease*		<5						
pH		8.6						

* Analysis was conducted using deionized water to simulate site conditions.

The concentrations of total oil and grease detected at three different depth intervals are shown in Figures 3, 4, and 5.

To document leachability, soluble oil and grease was evaluated utilizing Soluble Threshold Limit

Concentration (STLC) extraction techniques. This technique generally involves the use of a buffered citric acid solution in which the sample is agitated for several days to simulate exposure to a typical landfill leachate environment. To simulate natural site conditions, deionized water was used instead of the acid solution in this analysis.

Five soil samples collected from the upper six inches were sent to a laboratory specializing in hydrocarbon analysis to evaluate the different types of oil present in the samples collected. Samples selected contained total oil and grease ranging from 390 to 4,000 ppm. Two samples were selected from the undeveloped portion of the site (SS-1 and SS-2), and three samples were selected from the drive-in portion of the site (SS-8, SS-10, and SS-13). The five samples analyzed were selected due to their relatively high concentrations of oil and their locations across the site.

Initial characterization (using thin layer chromatography or TLC) of three samples (SS-2, 10, and 13) displayed chromatograms similar to asphaltic oil. The TLC characterization for the other two samples (SS-1 and 8) displayed chromatograms similar to motor oil. However, a more detailed scan with capillary gas chromatography only suggested the presence of motor oil in sample SS-8.

Analyses for selected EPA priority pollutant compounds were performed on two composite samples collected in October 1990. Each composite sample consisted of four individual samples from the 0.5 to 1.0 foot depth interval. One composite was taken from the undeveloped portion and the other from the drive-in portion of the site. Two sample

4.2.2 EPA Priority Pollutant Analyses

locations from the "drive-in" composite were placed near the northeastern border where hazardous materials containers were previously observed by Harding Lawson Associates. ~~Non-detectable~~ levels were detected in both composite samples for volatile organic compounds, semi-volatile organic compounds, polychlorinated biphenyls (PCBs) and pesticides, asbestos, cyanide, TPH gas with distinctions for benzene, toluene, ethylbenzene, and xylene (BTEX), and TPH diesel.

Table 5 shows the Total Threshold Limit Concentrations (TTL) and Soluble Threshold Limit Concentrations (STLC) for the metals, or levels at which soil is classified as a hazardous waste for purposes of treatment, storage, or disposal. In addition, the levels detected in the samples is presented. Please note that the maximum concentration possible in individual samples could be up to four times the composite value.

4.2.3 EPA Priority Pollutant Metals

TABLE 5. Analytical Results for Composite Soil Samples
for Priority Pollutant Metals
Two Hayward Parcels
Hayward, California
(concentrations in ppm)

Metal	Composite SS-1, 2, 3, 5 (Undeveloped Area)		Composite SS-6, 7, 8, 11 (Drive-In Area)	
	TTL Limit	STLC Limit	TTL Result	STLC Result
Antimony	500	15	<0.25	<0.0050
Arsenic	500	5	7.5	0.095
Beryllium	75	0.75	<0.50	<0.010
Cadmium	100	1	4.6	<0.010
Total Chromium	2,500	560	290	0.8
Copper	2,500	25	380	1.3
Lead	1,000	5	300	7.2
Mercury	20	0.2	0.089	<0.00020
Nickel	2,000	20	76	0.4
Selenium	100	1	0.37	<0.0050
Silver	500	5	<0.50	<0.010
Thallium	700	7	<0.25	<0.0050
Zinc	5,000	250	1,100	39

Also - composites
must use multi-
plying factor
(x4)

Not health based levels
what public health + environmental
health risk do these figures represent

LOWNEY ASSOCIATES

Additional analyses were performed for TTLC and STLC lead for the eight individual samples comprising the two composite samples, and for three samples collected in May 1991 from borings located near sample SS-3. Complete results for individual lead analyses are shown in Table 6.

TABLE 6. Analytical Results for TTLC and STLC Lead
From Individual Samples
October 31, 1990 and May 1, 1991
Two Hayward Parcels
Hayward, California
(concentrations in ppm)

<u>Sample Depth (Feet)</u>	<u>TTLC Result</u>	<u>TTLC Limit</u>	<u>STLC Result</u>	<u>STLC Limit</u>
SS-1, 0.5 - 1.0	140	1,000	3.6	5
SS-2, 0.5 - 1.0	42	1,000	0.72	5
SS-3, 0.5 - 1.0	270	1,000	9.9	5
SS-5, 0.5 - 1.0	24	1,000	0.32	5
SS-9, 0.5 - 1.0	180	1,000	1.7	5
SS-11, 0.5 - 1.0	7.9	1,000	0.24	5
SS-12, 0.5 - 1.0	390	1,000	0.70	5
SS-15, 0.5 - 1.0	27	1,000	0.34	5
HS-1, 0.5 - 1.0	1,700	1,000	4.6	5
HS-2, 0.5 - 1.0	390	1,000	3	5
HS-3, 0.5 - 1.0	300	1,000	1.2	5

The complete results of the chemical analyses performed on the ground water samples are shown in Appendix E and summarized in Tables 7 to 10.

Ground water samples were collected from five on-site monitoring wells in July, September, and October 1990 and analyzed for petroleum hydrocarbons. The analytical results for the ground water samples are summarized in Tables 7, 8, and 9.

4.3 Ground Water Quality Analysis and Results

4.3.1 Petroleum Hydrocarbon Analyses

TABLE 7. Laboratory Analysis of Ground Water Samples
For Petroleum Hydrocarbons
July, September, and October, 1990.
Two Hayward Parcels,
Hayward, California.
(concentrations in ppb)

<u>Well Date</u>	<u>Total Oil and Grease</u>	<u>TPH Diesel</u>	<u>TPH Gas</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylene</u>
AF-1							
7/7/90	<5,000	---	<30	<0.30	<0.30	<0.30	<0.30
9/7/90	<5,000	---	---	---	---	---	---
10/4/90	---	<50	<30	<0.30	<0.30	<0.30	<0.30
AF-2							
7/7/90	<5,000	---	<30	<0.30	<0.30	<0.30	<0.30
9/7/90	6,000	---	---	---	---	---	---
10/4/90	---	<50	<30	<0.30	<0.30	<0.30	<0.30
AF-3							
7/7/90	<5,000	---	<30	<0.30	<0.30	<0.30	<0.30
9/7/90	15,000	---	---	---	---	---	---
10/4/90	---	<50	<30	<0.30	<0.30	<0.30	<0.30
10/11/90	<5,000	---	<30	<0.30	<0.30	<0.30	<0.30
AF-4							
7/7/90	<5,000	---	<30	<0.30	<0.30	<0.30	<0.30
9/7/90	<5,000	---	---	---	---	---	---
10/4/90	---	<50	<30	<0.30	<0.30	<0.30	<0.30
AF-5							
7/7/90	<5,000	---	<30	<0.30	<0.30	<0.30	<0.30
9/7/90	<5,000	---	---	---	---	---	---
10/4/90	---	62	<30	<0.30	<0.30	<0.30	<0.30

In September 1990, the five monitoring wells were resampled and ground water analyzed for selected EPA priority pollutant compounds. Non-detectable concentrations were reported for all five wells for the following analyses: volatile organics, pesticides and PCB's, cyanide, and asbestos. The remaining ground water analytical results are summarized below in Table 8.

4.3.2 EPA Priority Pollutant Analyses

← what kind of pesticides?

TABLE 8. Laboratory Analysis of Ground Water Samples,
For Semi-Volatile Compounds and Metals.

September 7, 1990,
Two Hayward Parcels,
Hayward, California,
(concentrations in ppb)

Analytes	AF-1	AF-2	AF-3	AF-4	AF-5	Primary ¹ MCL	STLC ² Max Limit
Unidentified Semi-Volatile Organic Compounds	<0.005	0.300	<0.005	0.330	0.028	NA	NA
Antimony	<500	<500	<500	<500	<500	NA	15,000
Arsenic	180	58	120	99	120	50	5,000
Beryllium	<10	<10	<10	<10	<10	NA	750
Cadmium	<10	<10	<10	<10	<10	10	1,000
Chromium	190	62	190	230	770	100	560,000
Copper	92	24	120	90	380	NA	25,000
Lead	<50	<50	<50	25	130	15	5,000
Mercury	<0.2	<0.2	<0.2	<0.2	0.63	2	200
Nickel	<50	94	190	350	980	NA	20,000
Selenium	100	<50	63	55	<50	10	1,000
Silver	<10	<10	<10	<10	<10	50	5,000
Thallium	<500	<500	<500	<500	<500	NA	7,000
Zinc	200	64	250	280	820	NA	250,000

NA Not Available.

1. "New and Proposed Drinking Water Standards and Proposition 65 Water Quality Criteria", California Regional Water Quality Control Board, Central Valley Region, September 1989.
2. California Code of Regulations, Title 22, Section 22-66699.

In October 1990, one hydropunch ground water sample was obtained in the vicinity of well AF-3 (see Figure 2). The hydropunch sample was analyzed for motor oil by gas chromatography (GC), oil and grease by EPA test method 503 A & E, TPH gas and BTEX. Ground water from well AF-3 was analyzed by the same methods to provide a comparison. As shown in Table 9, non-detectable levels for all contaminants tested were found for both samples.

4.4 Hydropunch Sampling

TABLE 9. Laboratory Analysis of Hydropunch Ground Water Samples,
For Petroleum Hydrocarbons.

October 11, 1990,
Two Hayward Parcels,
Hayward, California,
(concentrations in ppb)

Well	Total Oil and Grease	Motor Oil by GC	TPH Gas	Benzene	Toluene	Ethylbenzene	Xylene
AF-3	<5,000	<50	<30	<0.30	<0.30	<0.30	<0.30
HP-13	<5,000	<50	<30	<0.30	<0.30	<0.30	<0.30

In May 1991, water samples were collected from three areas of ponded water at the site. Analytical results are shown below in Table 10.

4.5 Surface Water Quality Analysis and Results

TABLE 10. Laboratory Analysis of Ponded Water Samples, May 1991, Two Hayward Parcels, Hayward, California

<u>Sample</u>	<u>pH</u>	<u>Total Oil & Grease (ppm)</u>
HP-1	8.9	<5.0
HP-2	9.5	<5.0
HP-3	8.7	<5.0

Quality Control (QC) checks were employed to evaluate the accuracy and precision of laboratory analyses and to provide checks on field, transport, and storage procedures. Both field and laboratory QC procedures were used. Analytical results for the soil and ground water QC samples are presented below.

4.6 Quality Control

One rinsate blank was collected during the July sampling round. After the sampling equipment had been cleaned, the sampling bailer was rinsed again with distilled water. This water was decanted into VOA bottles and handled with the rest of the ground water samples. Cleaning blanks check potential volatile migration after cleaning procedures have been completed. The cleaning blank was labeled AF-6 and analyzed by Sequoia Analytical for TPH gas and BTEX. Non-detectable levels of TPH gas and BTEX were reported in the cleaning blank, as shown in Table 11 below, indicating that cross contamination of the samples during sampling as a result of improper cleaning procedures did not occur.

Split ground water samples were obtained in July and September of 1990 from well AF-3, and sent to Anametrix to be analyzed for total oil and grease by EPA Test Method 503 A & E. Split samples are used to check laboratory precision or the repeatability of laboratory results. No oil or grease was detected in the split ground water samples collected from AF-3 by Anametrix.

Laboratory blanks are volatile organic analysis (VOA) bottles filled with distilled water in the lab. One lab blank was taken into the field during the July sampling round, handled with the other samples, and returned to the lab with the rest of the samples. Laboratory blanks check potential volatile migration through the septa from more contaminated to less contaminated samples, ambient or residual contamination, or problems with laboratory analytic procedures and VOA bottle preparation procedures. The laboratory blank was analyzed for TPH gas and BTEX. Complete results for the quality control samples are shown in Table 11.

TABLE 11. Laboratory Analysis of Quality Control Soil and Ground Water Samples
Two Hayward Parcels,
Hayward, California
(concentrations in ppm)

	<u>Oil and Grease</u>	<u>TPH Gas</u>	<u>BTEX</u>
July Anametrix Sample AF-3	<5	NT	NT
July Sequoia Sample AF-3	<5	NT	NT
July Anametrix Sample EB-2, 0.5-1.0	660	NT	NT
July Sequoia Sample EB-2, 0.5-1.0	2,500	NT	NT
September Anametrix Sample AF-3	<5	NT	NT
September Sequoia Sample AF-3	15	NT	NT
September Anametrix Sample EB-5, 0.5-1.0	40	NT	NT
September Sequoia Sample EB-5, 0.5-1.0	120	NT	NT
July Rinsate Blank	NT	<30 ppb	<0.3 ppb
July Travel Blank	NT	<30 ppb	<0.3 ppb

NT = Not Tested

A comparison of results for duplicate ground water samples from well AF-3 shows that similar values were reported by the two laboratories. However, Sequoia did detect a low level of oil and grease near the detection limit in September that was not detected by Anametrix.

Split soil samples were obtained in July and October of 1990 and sent to Anametrix to be analyzed for total oil and grease by EPA Test Method 503 D & E. Split samples are used to check laboratory precision or the repeatability of laboratory results. Results are shown above in Table 11.

A comparison of duplicate soil samples shows variation in the results reported by the two labs, which, in our opinion, is because the samples were obtained from two separate, adjacent borings. Soils tend to be quite inhomogeneous even over short distances, and may have a significant affect on concentrations of oil and grease. In addition, analytical techniques and instruments may vary slightly between different labs.

5.0 CONCLUSIONS

The purpose of this reconnaissance investigation was to evaluate the soil and ground water quality at the site.

Concentrations of total oil and grease have been documented across the site generally in the upper 1.5 feet of soil. These samples also were shown not to contain TPH gas above the detection limit, and contained BTEX well below the action level. Fuel fingerprinting of five soil samples confirmed asphaltic oil in three samples, motor oil in one

5.1 Soil Quality

what action level?

sample, and an unconfirmed identification in one sample. In our opinion, the majority of the oil and grease detected is due to heavy solid phase hydrocarbons contained in the asphaltic material used in the construction of roads and parking areas for the drive-in. During our site visits, asphaltic chips were observed mixed in the gravel fill used in the drive-in portion of the site. Asphalt was also observed dumped in various locations in the undeveloped site areas. The majority of the oil and grease detected is likely the result of leaching of solid phase petroleum hydrocarbons from asphaltic fragments during the laboratory analysis and do not represent actual solute concentrations in the on-site soils. In addition, the STLC extraction analysis showed that the oil and grease is confined within the soil and will not migrate downward to the ground water under neutral pH conditions.

Soil pH at the site ranged from 8.4 to 12, which indicates that basic conditions prevail at the site. Nonetheless, in our opinion, an STLC test with a neutral solution is more representative of site conditions than an STLC test with an acidic solution. The highest pH readings may be due to the influence of concrete chips in the soil samples analyzed. Therefore, in our opinion, asphaltic oil in soil will not require remedial action and is not expected to pose an environmental health concern at the site. Asphalt is not considered a hazardous waste by the State of California.

Fingerprinting of five soil samples revealed ~~one location (SS-8) where oil and grease concentrations are likely caused by motor oil.~~ This boring was located on the drive-in portion of the site. In our

opinion, motor oil contamination is likely not very widespread at the site.

Analytical results of individual soil samples revealed one sample with an elevated level of soluble lead above the STLC and one sample with an elevated level of total lead above the TTLC. Our site reconnaissance revealed slag scattered throughout the gravel in the drive-in portion of the site, and over approximately 50 percent of the undeveloped portion of the site. The slag observed is a hard refuse, metal containing material and may be associated with steel smelting operations. It was previously used commonly as a fill material in the area. In our opinion, the elevated lead concentrations at the site are likely associated with slag material mixed in the soil. Slightly elevated concentrations (well below maximum total and soluble limits) of Chromium (III), copper, and zinc reported in the composite samples may also be related to slag material. The regulatory agencies have not yet classified slag used as fill material in the general area as a hazardous or non-hazardous waste. The classification of slag material is currently pending an extensive investigation being performed at Pacific States Steel in Union City, California.

Low concentrations of various other metals were detected in the composite soil samples. The concentrations of other select metals (arsenic, cadmium, mercury, nickel, and selenium) detected in the soils at the site were well below total and soluble maximum limits and likely represent natural baseline levels. Less than 5 percent of the total metal concentrations in the samples tested were found to be leachable using WET extraction techniques, indicating that the metals are relatively immobile.

Analysis of the ponded water samples revealed non-detectable concentrations of total oil and grease and a pH range from 8.7 to 9.5. These results indicate, in our opinion, that oil and grease contamination at the site is relatively immobile and likely confined to asphaltic chips, and not expected to leach out into the soil matrix.

5.2 Ponded Water Quality

Analysis of the ground water samples revealed low concentrations of metals, unidentified semi-volatile organic compounds, diesel, and total oil and grease. The levels of metals detected in ground water from wells AF-1, AF-2, AF-3, and AF-4, in our opinion, likely represent natural baseline conditions. Slightly elevated concentrations of selected metals were reported in well AF-5. However, the levels detected were all well below the soluble maximum limit. We understand the shallow ground water in the site vicinity is not used for potable purposes and hence, in our opinion, the levels of the metals detected in the ground water do not appear to represent a health concern at the site (City of Hayward Water Department, 1991).

5.3 Ground Water Quality

Low levels of total oil and grease were detected in wells AF-2 and AF-3 during the September sampling round, but not during the July sampling round indicating that the concentrations of oil and grease present in these wells is very near the detection limit. These ground water samples also were shown not to contain TPH as gas, TPH diesel, or BTEX above detection limits. In our opinion, the oil and grease contamination in the wells is likely associated with previous activities during operation of the drive-in theater. In our opinion, the unidentified semi-volatile organic compounds detected in wells AF-2 and AF-4, are likely components of oil and grease.

perhaps a water quality concern!

The higher levels of oil and grease, and the presence of TPH gas and BTEX, detected in well points installed by HLA in November 1989 were not revealed in ground water samples collected during our July and September sampling rounds. Analytical data obtained from well point or hydropunch ground water samples is considered to be less accurate than that obtained from permanent monitoring wells. The ground water samples obtained from the well points may have been contaminated by the overlying soil during sampling. The hydropunch sample obtained in this investigation (HP-13) was located near well point WP-4 installed by HLA. Analytical results for HP-13 indicate non-detectable levels of oil and grease, motor oil, TPH gas, and BTEX; whereas results from WP-4 showed 54 ppm motor oil, 0.13 ppm TPH gas, and low levels of ethylbenzene, toluene, and xylenes. The differences in analytical results may be due to different methods of obtaining ground water samples or could be related to variations in the ground water elevations since November 1989.

The TPH diesel concentration just above the detection limit in well AF-5 may have resulted from off-site gasoline and diesel fuel contamination incidents within 1/4 to 1/2 mile of the site. An on-site source is unlikely because TPH diesel was not detected in any soil samples or ground water from the other four monitoring wells. In our opinion, the low concentration of unidentified semi-volatile organic compounds detected in AF-5 may be components of diesel fuel. In order to evaluate the validity of results from well AF-5, you may want to consider resampling the ground water and analyzing for TPH diesel.

In our opinion, virtually no exchange of ground water is expected between the shallow zone and the Newark aquifer. This is due to the presence of the extensive Newark aquiclude (clay layer) between these two ground water zones. Thus, any contaminants impacting the shallow aquifer are not expected to migrate to the deeper Newark aquifer.

6.0 RECOMMENDATIONS

In our opinion, remedial action for asphaltic oil at the site will likely not be required. Asphalt is not considered a hazardous material and is presently used for roads and parking areas.

A limited amount of motor oil is also likely present on-site. ~~Consideration should be given to excavating and treating the soils near sample location SS-8 impacted with motor oil.~~

~~Elevated concentrations of lead are,~~ in our opinion, likely associated with slag material scattered across the site. Slag has been commonly used as aggregate base rock and is currently under consideration by regulatory agencies for classification. Therefore, it is not known at this time what action, if any, will be required to address this. It may be desirable to examine files for the on-going investigation at Pacific States Steel in Union City. Pacific States Steel is currently evaluating whether slag used as fill material should be considered a hazardous waste. The regulatory agencies analysis of this case will likely lead to classification of slag material as hazardous or non-hazardous material by the end of August 1991. We recommend waiting for the regulatory agencies' decision before performing further metal analyses on-site, if needed. Should the Department of Health

DELETED

Services classify slag as hazardous waste, this decision does not necessarily indicate that remedial action will be required at the site or that the on-site slag is hazardous.

In our opinion, ~~consideration~~ should also be given to a **periodic monitoring program** which would ~~document the ground water quality~~ beneath the site on an on-going basis. In addition, we recommend consulting an environmental attorney to evaluate any obligation to disclose to the County and State Department of Health Services and the California Regional Water Quality Control Board the findings in this report.

7.0 LIMITATIONS

Soil deposits and rock formations may vary in type, strength, and many other important properties across any geologic area. The study that we have made assumes that the data obtained in the field and laboratory are reasonably representative of field conditions and that the subsurface conditions are reasonably susceptible to interpolation and extrapolation between borings.

The accuracy and reliability of geo- or hydrochemical studies are a reflection of the number and type of samples taken and the extent of the analysis conducted, and is thus inherently limited and dependent upon the resources expended. Our sampling and analytical plan was designed using accepted environmental engineering principles and our judgement for the performance of a reconnaissance ground water quality investigation, and was based on the degree of investigation desired by you. It is possible to obtain a greater degree of

certainty, if desired, by implementing a more rigorous soil sampling program or by installation of a higher density of monitoring wells.

This report was prepared for the use of AM Homes in evaluating the environmental setting and ground water quality at the referenced site at the time of this study. We make no warranty, expressed or implied, except that our services have been performed in accordance with hydrogeological and environmental engineering principles generally accepted at this time and location. The hydrochemical and other data presented in this report can change over time and are applicable only to the time this study was performed.

* * * * *

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Publications

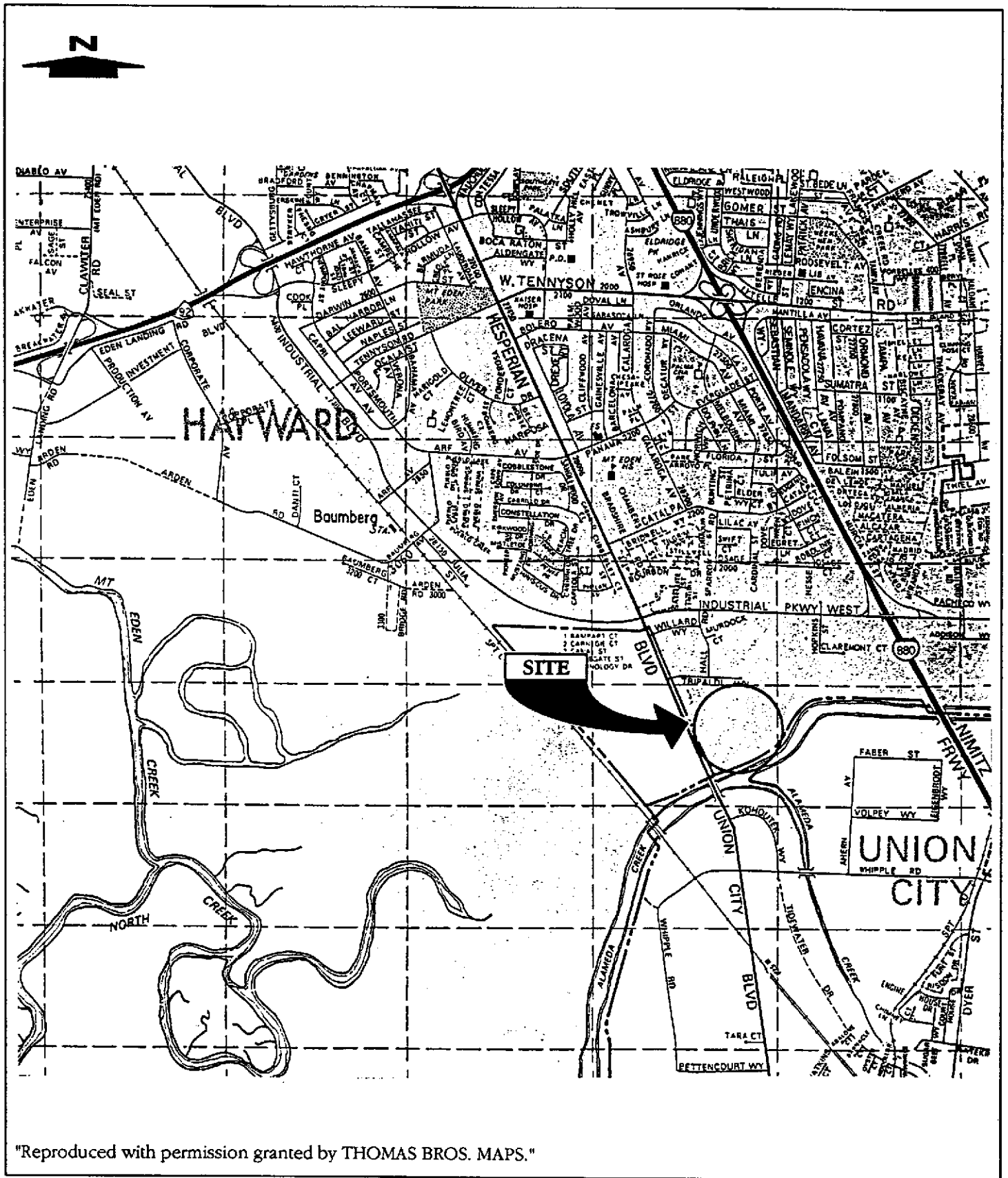
California Department of Water Resources, 1967, Evaluation of Groundwater Resources, South San Francisco Bay, Bulletin 118-1, Appendix A: Geology.

Earth Metrics Incorporated, 1987, Land Use Analysis of the Former Hayward Drive-In Site, 28968 Hesperian Boulevard, Hayward.

Harding Lawson Associates, 1989, Phase I Preliminary Hazardous Materials Site Assessment 32- and 7 - Acre Hayward Site, Hayward, California.

Personal Communication

Davidson, Jim, City of Hayward Water Department, July 5, 1991.



"Reproduced with permission granted by THOMAS BROS. MAPS."

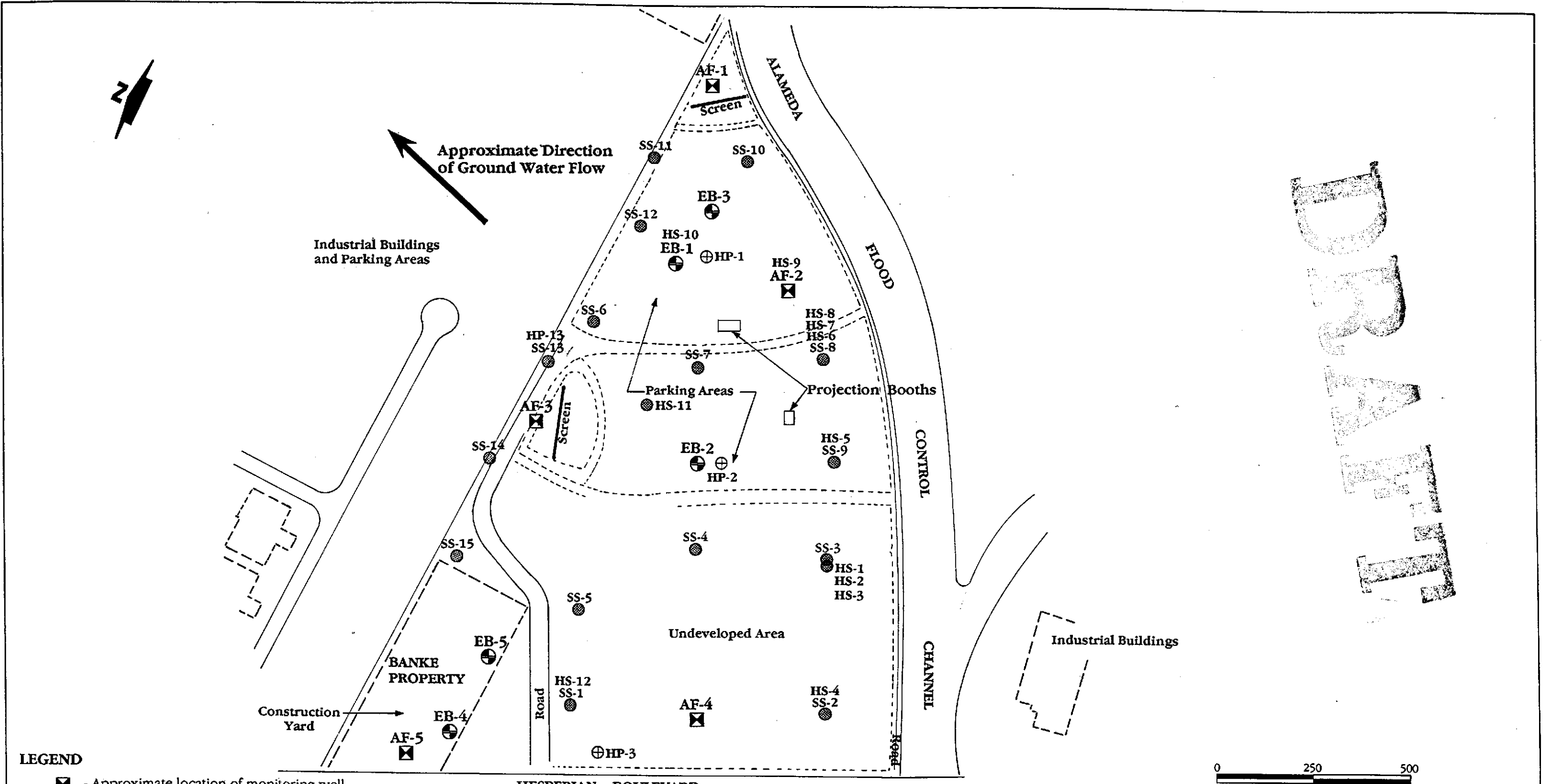
718-9/7/19 PML*JC

VICINITY MAP
 TWO HAYWARD PARCELS
 Hayward, California

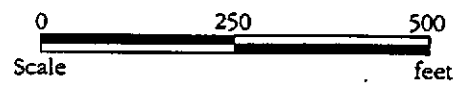
J.V. LOWNEY & ASSOCIATES
 ENVIRONMENTAL & GEOTECHNICAL CONSULTANTS

FIGURE 1
 718-9B, May 1991

DRAFT

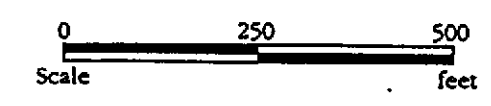
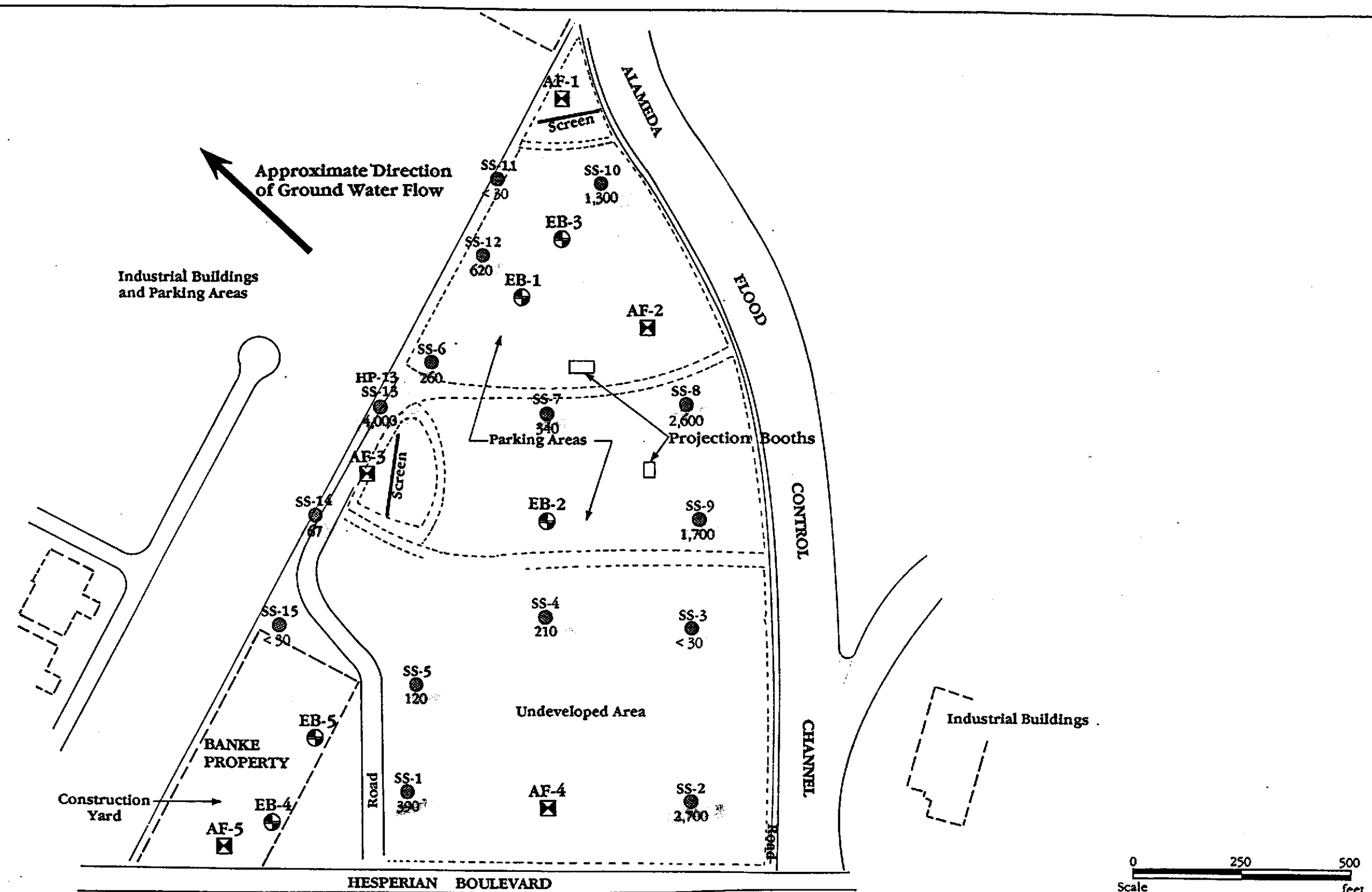


- LEGEND**
- ☒ - Approximate location of monitoring well
 - ⊕ - Approximate location of exploratory boring
 - - Approximate location of soil boring
 - ⊕ - Approximate location of surface water sample
 - AF - Alameda Flood Control (monitoring well); installed July 1990
 - EB - Exploratory boring; drilled July 1990
 - SS - Soil Sample; drilled October 1990
 - HS - Hayward Soil Sample; drilled May 1990
 - HP - Hayward Parcel (surface water sample); collected May 1991



J.V. LOWNEY & ASSOCIATES ENVIRONMENTAL & GEOTECHNICAL CONSULTANTS		SITE PLAN	
		TWO HAYWARD PARCELS Hayward, California	
PROJECT NO.	DATE	Figure 2	
718-9B	May 1991		

Base by Aerial Photo, dated 1981.



- LEGEND**
- ☒ - Approximate location of monitoring well
 - ⊕ - Approximate location of exploratory boring
 - - Approximate location of soil boring

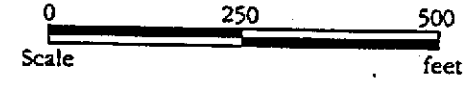
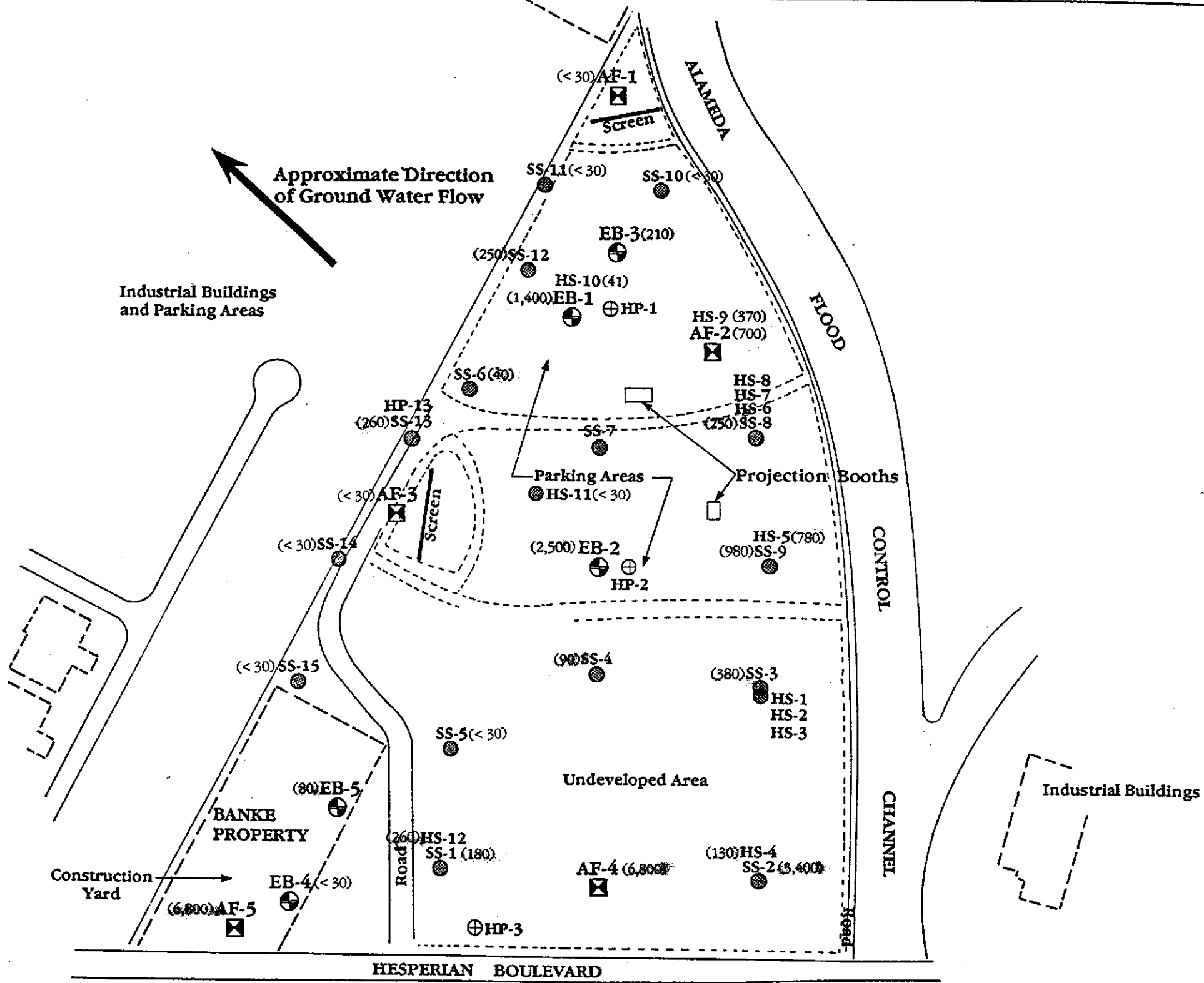
J.V. LOWNEY & ASSOCIATES ENVIRONMENTAL & GEOTECHNICAL CONSULTANTS			TOTAL OIL AND GREASE CONCENTRATIONS AT THE 0.0 TO 0.5 FOOT DEPTH INTERVAL (in ppm)		
			TWO HAYWARD PARCELS Hayward, California		
PROJECT NO.	DATE	Figure 3			
718-9B	May 1991				

Base by Aerial Photo, dated 1981.



Approximate Direction
of Ground Water Flow

Industrial Buildings
and Parking Areas

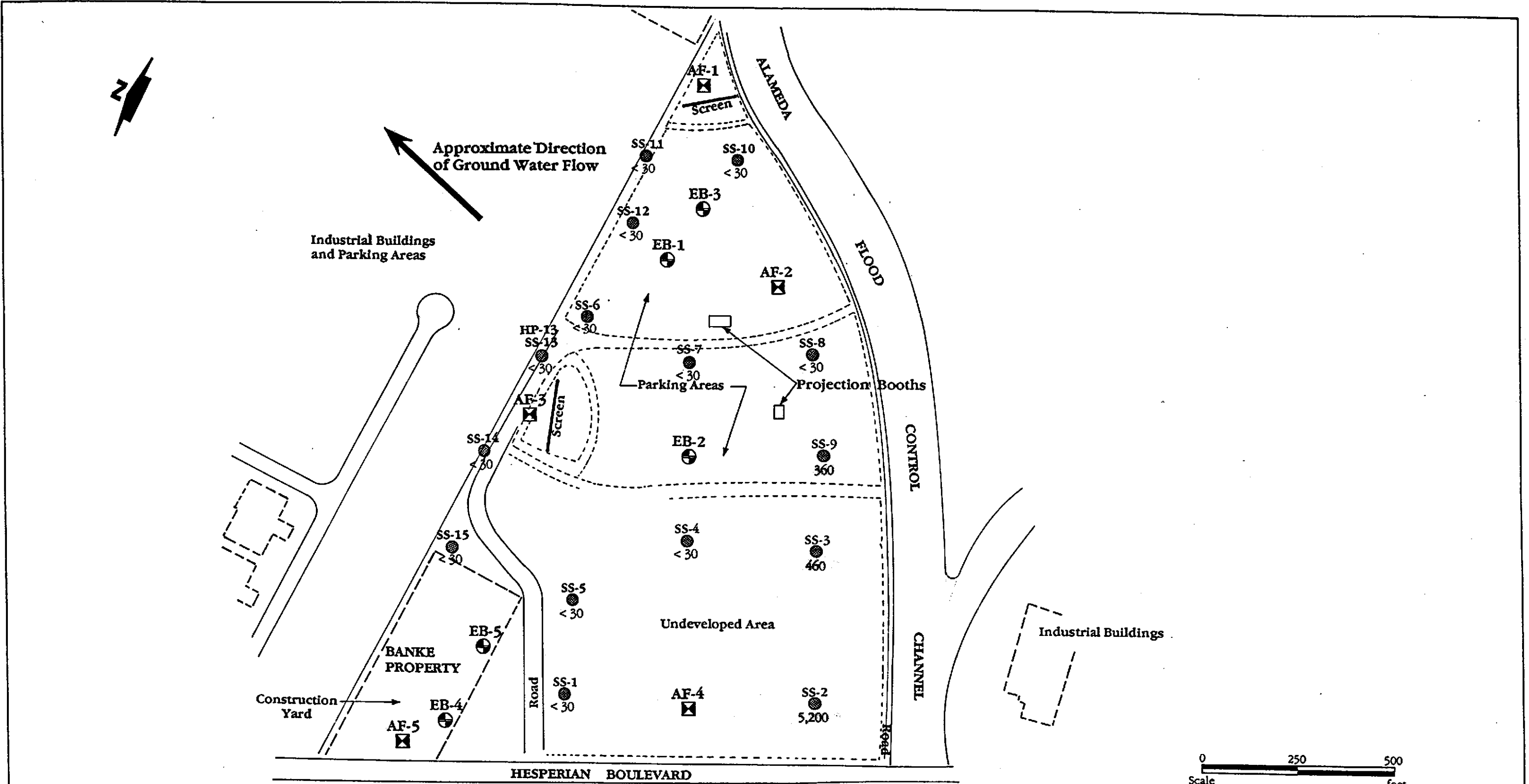


LEGEND

- ☒ - Approximate location of monitoring well
- ⊕ - Approximate location of exploratory boring
- - Approximate location of soil boring
- ⊕ - Approximate location of surface water sample

J.V. LOWNEY & ASSOCIATES ENVIRONMENTAL & GEOTECHNICAL CONSULTANTS		TOTAL OIL AND GREASE CONCENTRATIONS AT THE 0.5 TO 1.0 FOOT DEPTH INTERVAL (in ppm)	
		TWO HAYWARD PARCELS Hayward, California	
PROJECT NO.	DATE	Figure 4	
718-9B	May 1991		

Base by Aerial Photo, dated 1981.



LEGEND

- ☒ - Approximate location of monitoring well
- ⊕ - Approximate location of exploratory boring
- - Approximate location of soil boring

J.V. LOWNEY & ASSOCIATES
 ENVIRONMENTAL & GEOTECHNICAL CONSULTANTS

TOTAL OIL AND GREASE CONCENTRATIONS AT THE 1.0 TO 1.5 FOOT DEPTH INTERVAL (in ppm)		
TWO HAYWARD PARCELS Hayward, California		
PROJECT NO.	DATE	Figure 5
718-9B	May 1991	

Base by Aerial Photo, dated 1981.

APPENDIX A - PERMITS

The construction of monitoring wells, regardless of depth, comes under the standards established by the Alameda County Flood Control and Water Conservation District. Preliminary procedures to acquire local permits necessary to conduct this investigation were initiated on June 22, 1990. The construction of the monitoring wells was completed by a driller with a valid State Water Well Contractor's License (C57) from the firm Exploration Geo Services, San Jose, California on July 5 and 6, 1990. A copy of the permit is attached.

DRILLING



→ Ron H

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

3 July 1990

SOC.

JUL 5 1990

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301

Gentlemen:

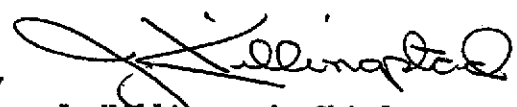
Enclosed is Groundwater Protection Ordinance permit 90393 for a monitoring well construction project at the intersection of Hesperian Boulevard and Alameda Creek in Hayward for AM Homes.

Please note that permit condition A-2 requires that a well construction report be submitted after completion of the work. The report should include drilling and completion logs, location sketch, and permit number.

If you have any questions, please contact Wyman Hong or Craig Mayfield at 484-2600.

Very truly yours,

Mun J. Mar
General Manager

By 
J. Killingstad, Chief
Water Resources Engineering

WH:mm
Enc.



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

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Intersection of Hesperian Blvd. and Flood Control Channel, Hayward, CA

PERMIT NUMBER 90393
 LOCATION NUMBER _____

CLIENT
 Name AM Homes
 Address 577 Salmar Ave Phone _____
 City Campbell, CA Zip 95008

Approved Wyman Hong Date 25 Jun 90
 Wyman Hong

APPLICANT
 Name J. V. Lowney & Associates
 Address 145 Addison Ave. Phone 415-328-6920
 City Palo Alto, CA Zip 94301

PERMIT CONDITIONS

Circled Permit Requirements Apply

DESCRIPTION OF PROJECT
 Water Well Construction Geotechnical _____
 Cathodic Protection _____ Well Destruction _____

PROPOSED WATER WELL USE
 Domestic _____ Industrial _____ Irrigation _____
 Municipal _____ Monitoring Other _____

PROPOSED CONSTRUCTION
 Drilling Method:
 Mud Rotary _____ Air Rotary _____ Auger
 Cable _____ Other Hollow Stem

WELL PROJECTS
 Drill Hole Diameter 8 in. Depth(s) 25-30 ft.
 Casing Diameter 2 in. Number _____
 Surface Seal Depth 25 ft. of Wells 5
 Driller's License No. C57-484288

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

ESTIMATED STARTING DATE 7/3/90
 ESTIMATED COMPLETION DATE 7/5/90

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

APPLICANT'S SIGNATURE Al A Pernig Date 6/22/90

- A. GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
 2. Notify this office (484-2600) at least one day prior to starting work on permitted work and before placing well seals.
 3. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or bore hole logs and location sketch for geotechnical projects. Permitted work is completed when the last surface seal is placed or the last boring is completed.
 4. Permit is void if project not begun within 90 days of approval date.
- B. WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie, or equivalent.
 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic, irrigation, and monitoring wells unless a lesser depth is specially approved.
- C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material.
- D. CATHODIC. Fill hole above anode zone with concrete placed by tremie, or equivalent.
- E. WELL DESTRUCTION. See attached.



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE ▲ PLEASANTON, CALIFORNIA 94566 ▲ (415) 484-2600

24 September 1990

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301

Gentlemen:

Enclosed is Groundwater Protection Ordinance permit 90576 for a contamination investigation at Hesperian Boulevard and Alameda Creek in Hayward for AM Homes.

If you have any questions, please contact Todd Wendler or Craig Mayfield at 484-2600.

Very truly yours,

Jim Dixon
General Manager

By


J. Killingstad, Chief
Water Resources Engineering

TW:mm
Enc.

J. V. LOWNEY ASSOC.

SEP 25 1990

RECEIVED



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94566 (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Intersection of Hesperian Blvd. and Flood Control Channel, Hayward, CA

PERMIT NUMBER 90576 LOCATION NUMBER

CLIENT Name AM Homes Address 577 Salmar Ave. Phone City Campbell, CA Zip 95008

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT Name J.V. Lowney + Associates Address 145 Addison Ave. Phone 415-328-6920 City Palo Alto, CA Zip 94301

A. GENERAL

- 1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date. 2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling log and location sketch for geotechnical projects. 3. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS

- 1. Minimum surface seal thickness is two inches of cement grout placed by tremie. 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

TYPE OF PROJECT: Construction, Geotechnical Investigation, Cathodic Protection, General, Water Supply, Contamination, Monitoring, Well Destruction, Hydropunch and Soil Borings

PROPOSED WATER SUPPLY WELL USE: Domestic, Industrial, Other N/A, Municipal, Irrigation

DRILLING METHOD: Rotary, Air Rotary, Auger X, Other Hollow Stem

DRILLER'S LICENSE NO. C57-484288

ADDITIONAL PROJECTS: 3 Hydropunch Borings (15-20 ft.), 15 Soil Borings (4 ft.) Drill Hole Diameter, Casing Diameter, Surface Seal Depth, Maximum, Depth, Number

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

ADDITIONAL TECHNICAL PROJECTS: Number of Borings, Maximum, Hole Diameter, Depth

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

ESTIMATED STARTING DATE 10/4/90 ESTIMATED COMPLETION DATE 10/5/90

E. WELL DESTRUCTION. See attached.

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

APPLICANT'S SIGNATURE Date 9.15.90

Approved Todd N. Wendler Date 19 Sep 90

APPENDIX B - SUBSURFACE INVESTIGATION

A subsurface investigation was performed on July 5 and 6, 1990, using a B-40 Mobile drill rig equipped with an 8-inch hollow-stem auger. Five borings were advanced into the uppermost water-bearing sediments to depths ranging from 11.5 to 26.5 feet at the locations shown on the Site Plan, Figure 2. The five borings were completed as monitoring wells. The soils encountered in the borings were logged using the Unified Soil Classification System (ASTM D-2487). The logs of the borings, as well as a key to the classification of the soil (Figure B-1), are included as part of this appendix.

The exploratory borings were sampled at 5-foot intervals to the bottom of the boring.

All sampling equipment was thoroughly cleaned with a tri-sodium phosphate and distilled water solution or steam cleaned. Soil samples were collected using a 2.5-inch O.D. California Modified drive sampler in the soil above the water table and a 2.0-inch O.D. Terzaghi drive sampler in the soil beneath the water table. Upon collection from the California drive sampler, the ends of the brass liner were covered with aluminum foil and then sealed with a plastic cap at each end. The caps were taped airtight and labeled appropriately. These samples were then immediately placed in an ice-cooled chest for transport to a certified analytical laboratory. Samples retrieved from the Terzaghi drive sampler were placed in glass bottles, sealed with a screw-on aluminum cap and labeled.

The standard penetration resistance blow counts were obtained by dropping a 140-pound hammer

through a 30-inch free fall. The blows per foot recorded on the boring logs represent the accumulated number of blows required to drive the sampler the last 12 inches of the interval indicated.

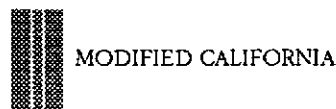
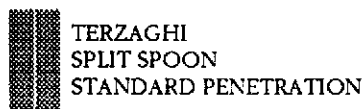
The attached boring logs and related information depict subsurface conditions only at the locations indicated and at the particular date designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at these boring locations. The passage of time may result in a change in the subsurface conditions due to environmental changes. In addition, any stratification lines on the logs represent the approximate boundary between soil types and the transition may be gradual.

PRIMARY DIVISIONS			SOIL TYPE	LEGEND	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW		Well graded gravels, gravel-sand mixtures, little or no fines.
			GP		Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM		Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC		Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW		Well graded sands, gravelly sands, little or no fines.
			SP		Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES	SM		Silty sands, sand-silt mixtures, non-plastic fines.
			SC		Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50%		ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL		Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50%		MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH		Inorganic clays of high plasticity, fat clays.
			OH		Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt		Peat and other highly organic soils.

DEFINITION OF TERMS

SILTS AND CLAY	U.S. STANDARD SERIES SIEVE			CLEAR SQUARE SIEVE OPENINGS			COBBLES	BOULDERS
	200	40	10	4	3/4"	3"		
	SAND			GRAVEL				
	FINE	MEDIUM	COARSE	FINE	COARSE			

GRAIN SIZES



SAMPLERS

SAND AND GRAVEL	BLOWS/FOOT*
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

RELATIVE DENSITY

SILTS AND CLAYS	STRENGTH†	BLOWS/FOOT*
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

CONSISTENCY

* Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split spoon (ASTM D-1586).

† Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

KEY TO EXPLORATORY BORING LOGS Unified Soil Classification System (ASTM D - 2487)

TWO HAYWARD PARCELS
Hayward, California

DRILL RIG: Mobile B-40

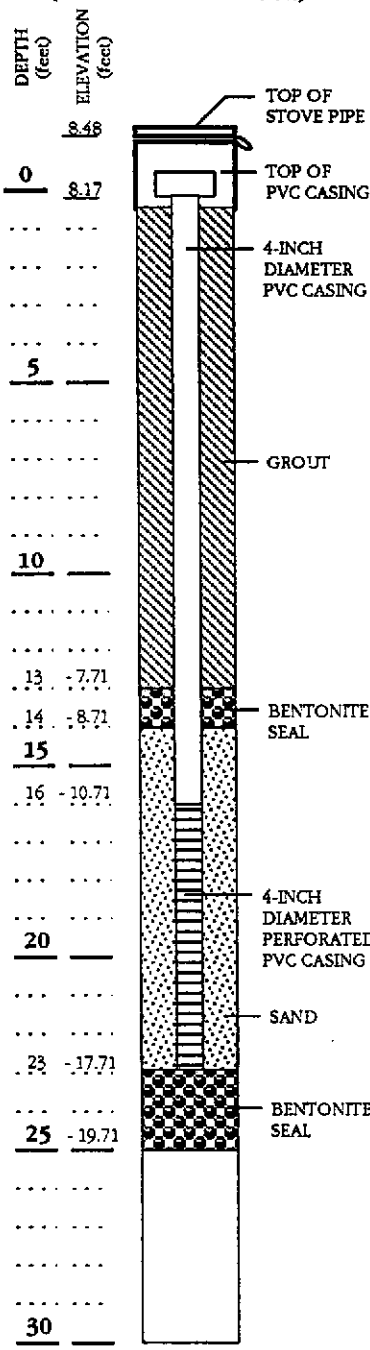
SURFACE ELEVATION: 5.29 feet

LOGGED BY: PMLe/SF

DEPTH TO GROUNDWATER: 11.14 feet
(From Surface Elevation)

BORING DIAMETER: 8 inches

DATE DRILLED: 7/15/90



DEPTH (feet)	ELEVATION (feet)	DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPOURS (ppm)
0	8.17	Brown silty clay, moderate to high plasticity, dry, few rootlets.	A	Very stiff	CH	[diagonal lines]			9	19	
									11	28	
5		Brown sandy clay, low to moderate plasticity, slightly moist, fine to coarse subangular to subrounded sand.	A	Very stiff	CL	[diagonal lines]	5		12	28	
10		Brown clayey sand, fine sand, slightly moist, well graded.	A	Medium dense	SC	[cross-hatch]					
		Black silty clay, moderate to high plasticity, moist.	A	Very stiff	CH	[diagonal lines]	10		23	12	
											▼ - final
15		Gray silty clay with trace sand, moderate to high plasticity, moist.	A	Very stiff	CH	[diagonal lines]	15		21	22	
		Brown sandy clay, fine to medium sand, moderate plasticity, moist.	A	Very stiff	CL/CH	[diagonal lines]					▽ - initial
20		Brown clayey sand, fine to coarse sand, well graded, saturated.	B	Medium dense	SC	[cross-hatch]	20		22	24	
		Brown sandy clay, fine sand, wet, well graded, moderate plasticity.	C	Very stiff	CL/CH	[diagonal lines]					
25		Brown clayey sand, fine sand, wet, well graded.	D	Loose	SC	[cross-hatch]	25		28	10	
		Bottom of Boring = 25.0 feet									
30							30				

718-9,7/19 PMLe*JC

MONITORING WELL LOG - AF-1
TWO HAYWARD PARCELS
 Hayward, California

DRILL RIG: Mobile B-40

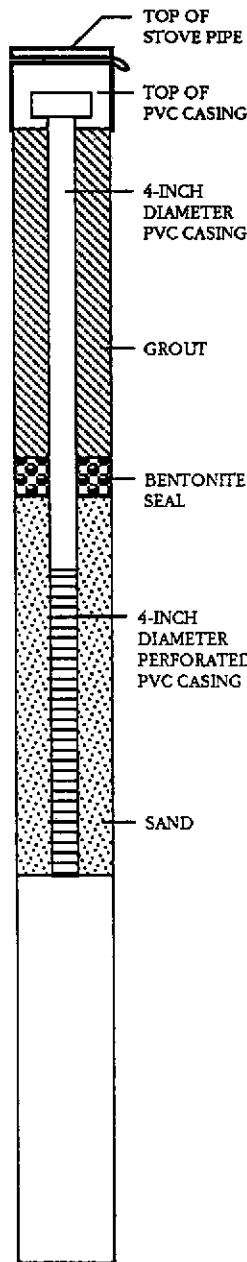
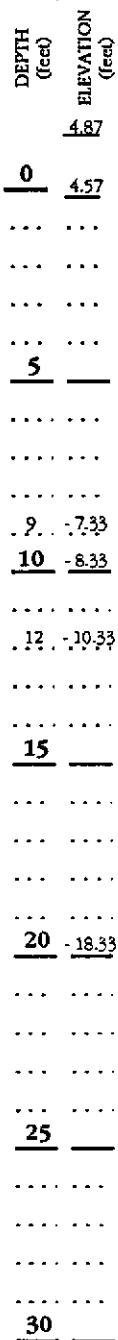
SURFACE ELEVATION: 1.67 feet

LOGGED BY: PMLe/SF

DEPTH TO GROUNDWATER: 6.25 feet
(From Surface Elevation)

BORING DIAMETER: 8 inches

DATE DRILLED: 7/15/90



DEPTH (feet)	ELEVATION (feet)	DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPORS (ppm)
0	4.57	(Fill) Gray sandy gravel, fine to coarse sand and fine gravel, well graded, subangular sand and gravel, dry.	AF	Loose	GP	[Pattern]	0		2	8	
5		(Fill) Gravelly clay with sand, fine to coarse sand and fine gravel, subangular sand and gravel, well graded, moist.	AF	Stiff	CL	[Pattern]	5		16	9	
5		Gray silty clay, moderate to high plasticity, moist to wet, trace fine sand.	A	Soft	CH	[Pattern]	5		33	4	
9	7.33	Black silty clay, high plasticity, moist, trace fine to medium grained sand.	A	Stiff	CH	[Pattern]					- final
10	8.33						10		27	12	
15		Brown sandy clay, moderate to highly plastic, moist, fine grained sand.	A	Stiff	CH	[Pattern]	15				∇ - initial
15							15		21	13	
20	18.33						20		26	7	
		Bottom of Boring = 20.0 feet									
25							25				
30							30				

718-9,7/19 PMLe*JC

NOTE: The stratification lines represent the approximate boundary between the soil types. The transition may be gradual.

MONITORING WELL LOG - AF-2
TWO HAYWARD PARCELS
Hayward, California

DRILL RIG: Mobile B-40

SURFACE ELEVATION: 2.64 feet

LOGGED BY: PMLe/SF

DEPTH TO GROUNDWATER: 7.83 feet
(From Surface Elevation)

BORING DIAMETER: 8 inches

DATE DRILLED: 7/15/90

DEPTH (feet) / ELEVATION (feet)

3.27

0 3.10

5

10 -7.36

11 -8.36

13 -10.36

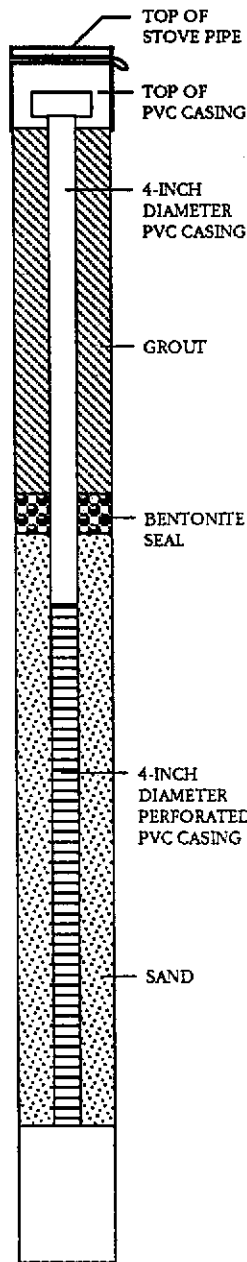
15

20

25

26.5 - 23.86

30



DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPORS (ppm)
Brown gravelly clay, moderate plasticity, fine to coarse gravel, angular, dry.	A	Very stiff	CL/CH	[Hatched pattern]	7		26		
Brown silty clay, moderate to highly plastic, slightly moist, roots present.	A	Very stiff	CH	[Diagonal lines]	5		34		
Dark brown silty clay, highly plastic, moist.	A	Stiff	CH	[Diagonal lines]	9		20		
Gray sandy clay, moderate plasticity, slightly moist, fine to coarse grained sand, angular to subangular sand.	A	Very stiff	CL/CH	[Hatched pattern]	10		14		
									▼ - final
					10		33		
									▽ - initial
					15		21		
Brown clayey sand, well graded, fine to medium sand, saturated.	B	Stiff	SC	[Dotted pattern]	19		9		
Brown sand, medium to coarse grained, rounded, saturated, well graded.	B		SW	[Dotted pattern]	15				
					20		19		
									15
					25				
Brown silty clay, moderately plastic, moist.	C		CL/CH	[Hatched pattern]	23				
Bottom of Boring = 26.5 feet									
					30				

718-9,7/19 PMLe*JC

MONITORING WELL LOG - AF-3
TWO HAYWARD PARCELS
Hayward, California

DRILL RIG: Mobile B-40

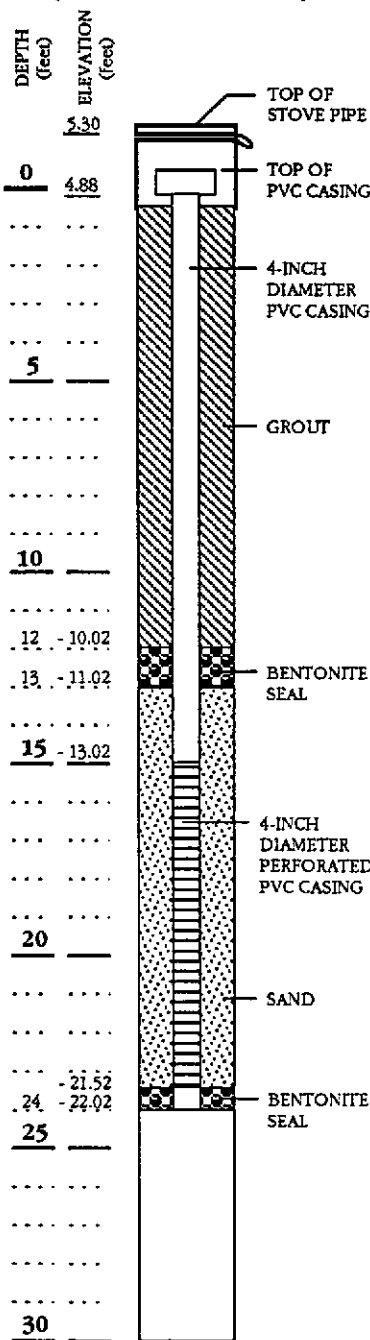
SURFACE ELEVATION: 1.98 feet

LOGGED BY: PMLe/SF

DEPTH TO GROUNDWATER: 6.20 feet
(From Surface Elevation)

BORING DIAMETER: 8 inches

DATE DRILLED: 7/15/90



DEPTH (feet)	ELEVATION (feet)	DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPOURS (ppm)
0	4.88	Brown silty clay, moderate plasticity, slightly moist, few rootlets.	A	Very stiff	CL/CH	[Hatched]			15	22	
		Moderate to high plasticity.			CH	[Hatched]			11	25	
5						[Hatched]	5		19	17	
						[Hatched]			-	-	- final
10		Gray silty clay, moderate to high plasticity, wet.	A	Stiff	CH	[Hatched]	10		42	10	
12	-10.02					[Hatched]					
13	-11.02					[Hatched]					
15	-13.02	Brown silty clay with trace fine sand, moderate plasticity, moist.	A	Very stiff	CL/CH	[Hatched]	15		22	32	
						[Hatched]					- initial
20		Brown clayey sand, fine sand, saturated, well graded.	B	Medium dense	SC	[Dotted]	20		23	22	
						[Dotted]					
		Brown sandy clay, very fine sand, wet, low plasticity.	C	Firm	CL	[Hatched]					
24	-21.52	Brown silt with minor fine sand, wet, low plasticity.	D	Firm	ML	[Hatched]			26	10	
25	-22.02	Bottom of Boring = 24.0 feet					25				
30							30				

718-9/719 PMLe*JC

NOTE: The stratification lines represent the approximate boundary between the soil types. The transition may be gradual.

MONITORING WELL LOG - AF-4
TWO HAYWARD PARCELS
Hayward, California

DRILL RIG: Mobile B-40

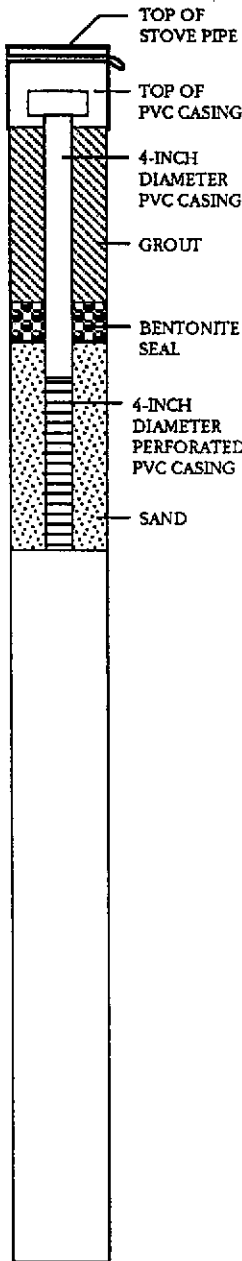
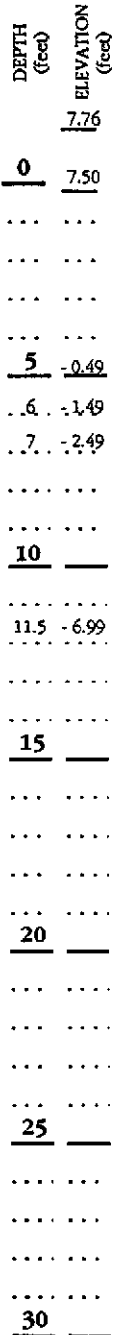
SURFACE ELEVATION: 4.51 feet

LOGGED BY: PMLe/SF

DEPTH TO GROUNDWATER: 6.91 feet
(From Surface Elevation)

BORING DIAMETER: 8 inches

DATE DRILLED: 7/15/90



DEPTH (feet)	ELEVATION (feet)	DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPORS (ppm)
0	7.50	(Fill) Red brown silty sand, fine to coarse grains, angular to subangular, slightly moist, well graded, minor gravel.	AF	Medium dense	SM	[Pattern]			14	13	
			A	Firm	ML	[Pattern]			17	7	
		Black clayey silt, low to moderate plasticity, slightly moist, trace coarse sand.	A	Stiff	CH	[Pattern]	5		26	14	
5	-0.49	Gray silty clay, moderate to high plasticity, slightly moist.	A			[Pattern]					
6	-1.49	Brown sand, fine grains, poorly graded, minor fines, saturated.	B	Loose	SP	[Pattern]					
7	-2.49	Gray clay, highly plastic, wet to saturated.	C	Firm	CH	[Pattern]	10		34	5	
10		Color change to dark gray, moist to wet.		Stiff		[Pattern]			42	13	
11.5	-6.99	Bottom of Boring = 11.5 feet									
15							15				
20							20				
25							25				
30							30				

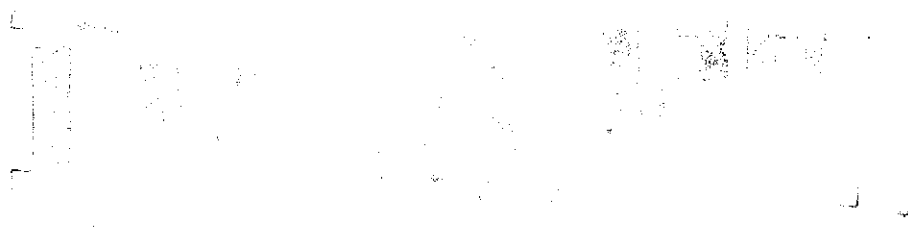
718-9,7/19 PMLe*JC

NOTE: The stratification lines represent the approximate boundary between the soil types. The transition may be gradual.

MONITORING WELL LOG - AF-5
TWO HAYWARD PARCELS
Hayward, California

APPENDIX C - MONITORING WELL INSTALLATION

The borings advanced into the uppermost water-bearing sediments were converted to "permanent" monitoring wells with the installation of PVC casing. The casing used for the wells was 2-inch I.D., threaded, flush-jointed, PVC Schedule 40 casing with sections containing perforated 0.02-inch slots installed in the lower portion of the wells. After the casing was installed, a filter pack composed of Lone Star number 3 sand was placed in the 3-inch diameter annulus to approximately 2 feet above the slotted casing. A 1-foot seal composed of bentonite pellets topped by cement was placed in the annulus above the sand pack to the surface. The wells were completed with locked stove pipes fitted over the PVC casing approximately two to three feet above grade. In addition, the PVC well casing was fitted with a watertight seal at the surface. Well construction details are shown on the boring logs.



**APPENDIX D - WELL DEVELOPMENT AND
GROUND WATER SAMPLING**

Each well was developed by pumping such that a representative ground water sample was obtained and fine-grained material was flushed from the well and surrounding soil. Approximately 24 hours after well development, the static water level was measured. A one-liter capacity, teflon bailer with new nylon rope was then used to purge three well casing volumes of water. Conductivity, pH, dissolved oxygen, and temperature measurements were recorded. All well developing and sampling equipment was cleaned with an aqueous tri-sodium phosphate solution and distilled water prior to entering the well.

A well development record for each well was maintained by Lowney Associates. A copy of this record is attached.

After the well development phase, the ground water was sampled. The one-liter bailer was lowered into the well below the water surface. After retrieving the bailer, the ground water was decanted into appropriate sample bottles, labeled, and immediately refrigerated until delivered to an analytical laboratory certified by the CDHS for chemical analysis of drinking water and hazardous waste. Carried along with the ground water samples was a chain of custody form that was maintained for all well samples.

DRAFT

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: 718-9 Project Name: 2 HAYWARD PARCELS

Date: 7/11/90

Field Geologist/Engineer: PMLe/SF

Well Number: AF-1 Well T.D. (completed): 25.72 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: _____ (inches) Well Diameter: 2 (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 13.89

Static Water Level After Recovery (depth to water): 14.44

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 7 (liters)

Three Well Volumes: 21 (liters) Production Time: 20 (minutes)

Total Volume Produced: 24 (liters) Number of Well Volumes: 4

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

Comments: _____
Well Development -
pumped out ~ 30 gallons
went dry after 15-20
gallons & slowly recharged

No. of Well Volumes	pH	Conductivity μ mhos/cm ³	Temp °C	DOx (ppm)
1	5.95	6130	20.4	2.04
2	5.90	6250	19.2	1.92
3	5.96	0270/6210	19.0	1.32
4	6.17	6300	18.5	1.84
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: 718-9 Project Name: 2 HAYWARD PARCELS
 Date: 7/11/90
 Field Geologist/Engineer: PMLe/SF
 Well Number: AF-2 Well T.D. (completed): 22.8 (feet)

Well Location: _____
 Perforated Interval: _____ to _____ (feet)
 Casing Diameter: _____ (inches) Well Diameter: _____ (inches)
 Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 9.07
 Static Water Level After Recovery (depth to water): 10.47
 Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 9 (liters)
 Three Well Volumes: 27 (liters) Production Time: 20 (minutes)
 Total Volume Produced: 27 (liters) Number of Well Volumes: 3
 Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____
 Sampling Method: _____
 Sample Description: _____
 Depth Where Sample Collected: _____
 Where/When Sample Delivered: _____

Comments: _____
Well Development -
pumped out ~ 30-35
gallons total. Went dry
after 5 gallons + slowly
recharged
80% AT 11.85F

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^2$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.61	3670	23.6	3.22
2	6.56	3510	21.5	2.19
3	6.57	3510	21.1	2.11
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: 718-9 Project Name: 2 HAYWARD PARCELS

Date: 7/11/90

Field Geologist/Engineer: PMLC/SF

Well Number: AF-3 Well T.D. (completed): 24.59 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: 2 (inches) Well Diameter: 2 (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 8.21

Static Water Level After Recovery (depth to water): 8.55

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 10 (liters)

Three Well Volumes: 30 (liters) Production Time: 20 (minutes)

Total Volume Produced: 30 (liters) Number of Well Volumes: _____

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

Comments: _____
Well Development -
pumped out ~ 30
gallons total. Recharges
quickly

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^3$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.41	4000	19.8	1.31
2	6.42	5180	18.5	3.01
3	6.68	4480	18.1	10.70
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: 718-9 Project Name: 2 Hayward Parcels
 Date: 7/11/90

Field Geologist/Engineer: PMLe/SF

Well Number: AF-4 Well T.D. (completed): 25.65 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: 2 (inches) Well Diameter: 2 (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 8.98

Static Water Level After Recovery (depth to water): 9.50

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 10 (liters)

Three Well Volumes: 30 (liters) Production Time: 20 (minutes)

Total Volume Produced: 30 (liters) Number of Well Volumes: 3

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

TI (200)(.016)
≈ 10.05

Comments: _____

Well Development-
pumped out 35 gallons
total. Recharges quickly.

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^3$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.42	3880	20.7	5.52
2	6.37	4160	19.9	5.19
3	6.44	4240	19.4	4.44
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: 718-9 Project Name: 2 Hayward Parcels
 Date: 7/11/90

Field Geologist/Engineer: PMLe/SF
 Well Number: AF-5 Well T.D. (completed): 13.77 (feet)

Well Location: _____
 Perforated Interval: _____ to _____ (feet)

Casing Diameter: 2 (inches) Well Diameter: 2 (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 9.52

Static Water Level After Recovery (depth to water): 9.65

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 3 (liters)

Three Well Volumes: 9 (liters) Production Time: 5-10 (minutes)

Total Volume Produced: 9 (liters) Number of Well Volumes: 3

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____
 Sampling Method: _____
 Sample Description: _____
 Depth Where Sample Collected: _____
 Where/When Sample Delivered: _____

$\pi(51)(.015)$
 $= 2.56$

Comments: Well Development -
pumped in 5 gallons
total, very slow to
recharge

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^2$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.23	0210	25.6	16.22
2	6.23	0200	23.9	12.09
3	6.07	0190	24.1	7.00
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNY & ASSOCIATES

Project Number: P3723 Project Name: Two Hayward

Date: 9/7/90

Field Geologist/Engineer: PMLe/SF

Well Number: AF-1 Well T.D. (completed): 25.75 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: 2 (inches) Well Diameter: 8 (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 14.27

Static Water Level After Recovery (depth to water): 15.60

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 7 (liters)

Three Well Volumes: 21 (liters) Production Time: 15 (minutes)

Total Volume Produced: 21 (liters) Number of Well Volumes: 3

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

$\pi(137.8)(.0167)$
 $= 6.9$

(x10)

Comments: _____

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^3$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	5.95	5630	21.4	11.35
2	6.08	5750	20.9	10.69
3	6.20	5840	18.9	14.59
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: P3723 Project Name: Two Hayward

Date: 9/7/90

Field Geologist/Engineer: PML 15F

Well Number: AF-2 Well T.D. (completed): 22.80 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: 2 (inches) Well Diameter: 8 (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 9.55

Static Water Level After Recovery (depth to water): 11.2

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 8 (liters)

Three Well Volumes: 24 (liters) Production Time: 15 (minutes)

Total Volume Produced: 24 (liters) Number of Well Volumes: 3

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

$\pi (159)(.016)$
 ≈ 8

Comments: _____

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^3$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.45	3520	23.5	2.79
2	6.50	3260	22.8	2.35
3	6.47	3680	22.7	2.37
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: P3723 Project Name: Two Hayward

Date: 9/7/90

Field Geologist/Engineer: PMLe/SF

Well Number: AF-3 Well T.D. (completed): 24.55 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: 2 (inches) Well Diameter: 8 (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 8.52

Static Water Level After Recovery (depth to water): 8.82

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
 Top of Casing
 Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 10 (liters)

Three Well Volumes: 30 (liters) Production Time: 15 (minutes)

Total Volume Produced: 30 (liters) Number of Well Volumes: 3

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

*71 (172.4)(015)
9.7*

Comments: _____

(x 10)

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^3$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.90	3860	19.0	13.54
2	6.81	4850	17.3	15.49
3	6.85	4950	17.6	10.08
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: P3723 Project Name: 2 - HAYWARD

Date: 9/7/90

Field Geologist/Engineer: PMLE/SF

Well Number: AF-4 Well T.D. (completed): 24.9 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: _____ (inches) Well Diameter: 2 (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 9.22

Static Water Level After Recovery (depth to water): 9.75

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 10 (liters)

Three Well Volumes: 30 (liters) Production Time: _____ (minutes)

Total Volume Produced: 30 (liters) Number of Well Volumes: 3

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

Comments: _____

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^3$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.84	4140	19.7	2.05
2	6.91	4470	18.5	2.37
3	6.90	4490	18.5	2.30
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING J.V. LOWNEY & ASSOCIATES

Project Number: P3723 Project Name: Two Hayward

Date: 9/7/90

Field Geologist/Engineer: PMLe/SF

Well Number: AF-5 Well T.D. (completed): 13.15 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: 2 (inches) Well Diameter: 8 (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 10.47

Static Water Level After Recovery (depth to water): _____

Height of Datum Above (Below) Ground: _____ (feet)

Water Elevation: _____ (feet MSL) Well Volume: 2 (liters)

Three Well Volumes: 6 (liters) Production Time: _____ (minutes)

Total Volume Produced: _____ (liters) Number of Well Volumes: _____

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

$\pi (32.16)(0.015)$
 ≈ 1.6

Comments: _____

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^2$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.48	0800	29.3	11.74
2	6.55	0220	25.0	15.68
3	6.55	0210	24.1	16.79
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING

J.V. LOWNEY & ASSOCIATES

Project Number: 718-9A Project Name: 2 - HAYWARD

Date: 10-9-90

Field Geologist/Engineer: SF

Well Number: AF-1 Well T.D. (completed): 25.5 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: _____ (inches) Well Diameter: _____ (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 14.34

Static Water Level After Recovery (depth to water): 19.80

Height of Datum Above (Below) Ground: _____ (feet)

Water Elevation: _____ (feet MSL) Well Volume: 7 (liters)

Three Well Volumes: 21 (liters) Production Time: _____ (minutes)

Total Volume Produced: 21 (liters) Number of Well Volumes: _____

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Water Level Measured From:	
<input checked="" type="checkbox"/>	Top of Casing
<input type="checkbox"/>	Top of Box

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

Comments: 11:00

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^3$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.73	6610		5.43
2	6.67	5540		5.46
3	5.68	6570		5.49
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: 718-9A Project Name: 2-HAYWARD

Date: 10-4-90

Field Geologist/Engineer: SF

Well Number: AF-2 Well T.D. (completed): 22-7.9 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: _____ (inches) Well Diameter: _____ (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 9.78

Static Water Level After Recovery (depth to water): 11.2

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 5 (liters)

Three Well Volumes: 24 (liters) Production Time: _____ (minutes)

Total Volume Produced: 24 (liters) Number of Well Volumes: _____

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

Comments: 17:00

17:00

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^2$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	7.11	3830		5.47
2	7.08	3570		5.53
3	7.05	3610		5.53
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING

J.V. LOWNEY & ASSOCIATES

Project Number: 718-9A Project Name: 2-HAYWARD

Date: 10-9-90

Field Geologist/Engineer: SF

Well Number: AF-3 Well T.D. (completed): 24.55 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: _____ (inches) Well Diameter: _____ (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 8.57

Static Water Level After Recovery (depth to water): 8.81

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:

Top of Casing

Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 10 (liters)

Three Well Volumes: 30 (liters) Production Time: _____ (minutes)

Total Volume Produced: 30 (liters) Number of Well Volumes: _____

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

X10

Comments: 9:30

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^2$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	7.18	4170		5.29
2	7.04	4790		5.30
3	7.03	4910		5.31
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING
J.V. LOWNEY & ASSOCIATES

Project Number: 718-9A Project Name: 2-HAYWARD

Date: 10-9-90

Field Geologist/Engineer: SF

Well Number: AF-9 Well T.D. (completed): 29.78 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: _____ (inches) Well Diameter: _____ (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 9.31

Static Water Level After Recovery (depth to water): 9.70

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 10 (liters)

Three Well Volumes: 30 (liters) Production Time: _____ (minutes)

Total Volume Produced: 30 (liters) Number of Well Volumes: _____

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

Comments: 1:15

[X10]

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^3$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.40	3650		5.27
2	6.42	3910		5.60
3	6.50	4000		5.59
4				
5				
6				
7				
8				
9				
10				

RECORD OF WELL DEVELOPMENT/SAMPLING

J.V. LOWNEY & ASSOCIATES

Project Number: 718-9A Project Name: 2 - Haywards

Date: 10-1-90

Field Geologist/Engineer: SE

Well Number: AF-5 Well T.D. (completed): 13.94 (feet)

Well Location: _____

Perforated Interval: _____ to _____ (feet)

Casing Diameter: _____ (inches) Well Diameter: _____ (inches)

Ground Elevation: _____ (feet)

Static Water Level Prior to Developing Well (depth to water): 10.75

Static Water Level After Recovery (depth to water): 11.2

Height of Datum Above (Below) Ground: _____ (feet)

Water Level Measured From:
<input checked="" type="checkbox"/> Top of Casing
<input type="checkbox"/> Top of Box

Water Elevation: _____ (feet MSL) Well Volume: 2 (liters)

Three Well Volumes: 6 (liters) Production Time: _____ (minutes)

Total Volume Produced: 6 (liters) Number of Well Volumes: _____

Production Rate: _____ (liters per minute) Drawdown Rate: _____ (feet)

Development Method: _____

Sampling Method: _____

Sample Description: _____

Depth Where Sample Collected: _____

Where/When Sample Delivered: _____

Comments: 2:00

33% at 11.0

No. of Well Volumes	pH	Conductivity $\mu\text{mhos}/\text{cm}^3$	Temp $^{\circ}\text{C}$	DOx (ppm)
1	6.47	0290		5.63
2	6.44	0200		5.56
3	6.51	0210		5.57
4				
5				
6				
7				
8				
9				
10				

APPENDIX E - ANALYTICAL RESULTS

Ten soil samples from the 0.5 to 1.0 foot depth interval and five soil samples from the 4.0 to 5.0 foot interval were collected on July 5 and 6, 1990, placed on ice, and transported to a Sequoia Analytical laboratory along with a chain of custody form. The samples were analyzed for total oil and grease (EPA Test Method 503 D & E), and TPH gas with a distinction for BTEX (EPA Test Method 5030/8015/8020). One soil split sample was analyzed by Anametrix for total oil and grease.

Forty-five soil samples from fifteen soil borings from the surface to 1.5 feet depth intervals were collected on October 3, 1990, placed on ice, and transported to Sequoia Analytical laboratory along with a chain of custody form. The samples were analyzed for total oil and grease (EPA Test Method 503 D & E). One split sample was analyzed by Anametrix for total oil and grease.

Nine soil samples from the 0.5 to 1.0 foot interval were analyzed from soil borings advanced to a depth of three feet on May 1, 1990, placed on ice, and transported to Sequoia Analytical laboratory along with a chain of custody form. Six samples were analyzed for pH and total oil and grease (EPA Test Method SM 5520 E & F), five samples were analyzed for STLC oil & grease with deionized water, and three samples were analyzed for TTLC and STLC lead.

The ground water samples collected from the on-site wells on July 11, 1990, were transported on ice to Sequoia Analytical laboratory along with a chain of custody form and analyzed for total oil and grease (EPA Test Method 503 A & E), TPH gas with a



distinction for BTEX (EPA Test Method 5030/8015/8020). One rinsate and one travel blank were analyzed by the same laboratory for TPH gas and BTEX. In addition, one ground water split sample was sent to Anametrix to be analyzed for total oil and grease.

Ground water samples collected from the on-site wells on September 7, 1990, were transported on ice to Sequoia Analytical laboratory along with a chain of custody form and analyzed for a full priority pollutant scan including: volatile organic compounds (EPA Test Method 8240), semi-volatile organic compounds (EPA Test Method 8270), organochlorine pesticides and PCB's (EPA Test Method 8080), cyanide, asbestos (by polarized light microscopy), 13 EPA priority pollutant metals, and total oil & grease (EPA Test Method 503 A & E). One ground water split sample was collected and analyzed by Anametrix for total oil & grease.

The ground water samples collected from the five on-site monitoring wells and one hydropunch boring on October 3 and 4, 1990, were transported on ice to Sequoia Analytical laboratory along with a chain of custody form. Six ground water samples were analyzed for TPH gas with a distinction for BTEX; five monitoring well samples were analyzed for TPH diesel; one monitoring well and one hydropunch sample were analyzed for TPH motor oil (EPA Test Method 3510/8015) and total oil & grease (EPA Test Method 503 A & E).

The surface water samples collected from three different areas of ponding on May 1, 1990, were transported on ice to Sequoia Analytical laboratory along with a chain of custody form. Three ponded

water samples were analyzed for pH and total oil & grease (EPA Test Method SM 5520 B & F).

Sequoia Analytical and Anametrix laboratories are certified by CDHS for the above analyses. Ground water samples analyzed for thirteen priority pollutant metals were filtered by the laboratory prior to analysis. Attached are copies of these results and the chain of custody documentation.

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

Normal TAT

JOB NO. 718-9		PROJECT NAME/LOCATION Two Hayward Parcels			NO. OF CON- TAINERS	ANALYSIS REQUIRED							SHIP TO:			
SAMPLER (S): (Signature) <i>Peter Seffler / Jason Felt</i>						(SP3) TPH (SP3) (SP3) (SP3)	Total Gas + BTEX	Total O.I. + Grease (SP3)	/	/	/	/	/	J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
DATE	TIME	SAMPLE DESCRIPTION												REMARKS		
7/5/90	9:30	AF-1, 0^s-1^o			1	X	X									
	9:30	AF-1, 4^s-5^o			1	X	X									
	12:00	AF-2, 0^s-1^o			1	X	X									
	12:00	AF-2, 4^s-5^o			1	X	X									
	3:00	AF-3, 0^s-1^o			1	X	X									
✓	3:00	AF-3, 4^o-4^s			1	X	X									
Relinquished by: (Signature)		Date	Time	Received By: (Signature)			Relinquished by: (Signature)		Date	Time	Received By: (Signature)					
<i>Peter Seffler</i>		7/5/90	5:15													
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)			Date	Time	Remarks:							
				<i>[Signature]</i>			7/5/90	1710								

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO. 718-9		PROJECT NAME/LOCATION 2 Hayward Parcels			NO. OF CON- TAINERS	ANALYSIS REQUIRED						SHIP TO:						
SAMPLER (S): (Signature) <i>Peter Leffler / Susan Tester</i>						<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">(50-20/2013/1000) TPH Gas + BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">Total Oil + Greases (50-20/2013/1000)</div> </div>						J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920						
DATE 7/6/90	TIME	SAMPLE DESCRIPTION										REMARKS						
AF-4	9:30	AF-4, 0 ^s -1, soil			1	X	X											3 week TAT
	9:30	AF-4, 4 ^o -4 ^s , soil			1	X	X											
	11:30	AF-5, 0 ^s -1, soil			1	X	X											
	11:30	AF-5, 4 ^o -4 ^s , soil			1	X	X											
	1:00	EB-4, 0 ^s -1, soil			1	X	X											
	1:30	EB-5, 0 ^s -1, soil			1	X	X											
	1:30	EB-2, 0 ^s -1, soil			1	X	X											
	4:00	EB-1, 0 ^s -1, soil			1	X	X											
✓	4:30	EB-3, 0 ^s -1, soil			1	X	X											
Relinquished by: (Signature) <i>Peter Leffler</i>		Date 7/6/90	Time 6:10	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)								
Laboratory of Record:		Date 7/6/90	Time 6:10	Received for Laboratory By: (Signature) <i>[Signature]</i>		Date	Time	Remarks:										

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO. 718-9		PROJECT NAME/LOCATION 2 Hayward Parcels			NO. OF CON- TAINERS	ANALYSIS REQUIRED						SHIP TO:					
SAMPLER (S): (Signature) <i>Peter Leffler / Jason Foster</i>						<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH Gas + BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Total Oil + Grease</div> </div>						J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920					
DATE	TIME	SAMPLE DESCRIPTION															
7/11/90	10:45	AF-5, Groundwater			3	X									3 Week TAT		
	10:45	AF-5, "			1	X											
	12:15	AF-1 "			3	X											
	12:15	AF-1 "			1	X											
	1:45	AF-3 "			3	X											
	1:45	AF-3 "			1	X											
	3:00	AF-2 "			3	X											
	3:00	AF-2 "			1	X											
	5:00	AF-4 "			3	X											
	5:00	AF-4 "			1	X											
V	2:30	AF-6			3	X											
		Travel Blank			1	X											
Relinquished by: (Signature)		Date	Time	Received By: (Signature)			Relinquished by: (Signature)		Date	Time	Received By: (Signature)						
<i>Peter Leffler</i>		7/11/90	6:00														
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)			Date	Time	Remarks:								
		7/11	6:00	<i>[Signature]</i>													

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO. 718-9		PROJECT NAME/LOCATION 2 Hayward Parcels			NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:			
SAMPLER (S): (Signature) Peter Leffler / Jason Foster						Oil + Grease (503 DT 2)							J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
DATE	TIME	SAMPLE DESCRIPTION											REMARKS		
7/11/90	1:45	AF-3, Ground water			1	X							Normal TAT		
7/11/90	4:00	EB-3, Soil, 05-1			1	X									
Relinquished by: (Signature) Peter Leffler		Date 7/12/90	Time 14:10	Received By: (Signature) Tahni Hernandez		Relinquished by: (Signature)		Date	Time	Received By: (Signature)					
Laboratory of Record: Anamatrix		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:							

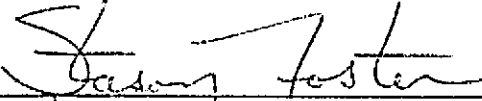
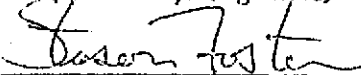
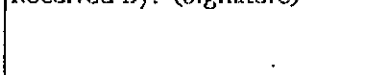
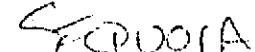

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED							SHIP TO:		
P3723		Two Hayward Parcels			8210 + FORE-SEAN 8270 + OVER-SEAN 8080 oil & GREASE (53 DIE) ASBESTOS CYANIDE	+	+	+	+	+	+	J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
SAMPLER(S): (Signature) Peter Seffler		Eason Foster										REMARKS		
DATE	TIME	SAMPLE DESCRIPTION												
9/7/90	11:15	AF-1	GROUND WATER	9	X	X	X	X	+	+	+	3 WK. TURNAROUND	Asbestos has HNO ₃	
	12:00	AF-2		9	X	X	X	X	+	+	+		Asbestos has HNO ₃	
	1:00	AF-3		9	X	X	X	X	+	+	+			
	2:00	AF-4		9	X	X	X	X	+	+	+			
✓	3:00	AF-5		9	X	X	X	X	+	+	+			
		TRACE/BLANK		1								Please Hold		
Relinquished by: (Signature) Peter Seffler		Date 9/7/90	Time 4:00	Received By: (Signature) K. Walters		Date 9/7	Time 4:05pm	Relinquished by: (Signature)		Date	Time	Received By: (Signature)		
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:						

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO. <i>P3723</i>		PROJECT NAME/LOCATION <i>Two Hayward</i>		NO. OF CONTAINERS	ANALYSIS REQUIRED <i>Oil + Grease (SU3PHE)</i>					SHIP TO:		
SAMPLER(S): (Signature) <i>Peter Leffler / Jason Testa</i>										J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
DATE	TIME	SAMPLE DESCRIPTION								REMARKS		
<i>9/7/90</i>	<i>1:05</i>	<i>A.F-3, Groundwater</i>		<i>2</i>	<i>X</i>						<i>Normal TAT</i>	
Relinquished by: (Signature) <i>Jason Testa</i>		Date <i>9/10/90</i>	Time <i>1400</i>	Received By: (Signature) _____		Relinquished by: (Signature) _____		Date 	Time 	Received By: (Signature) _____		
Laboratory of Record: <i>ANA-METAL</i>		Date 	Time 	Received for Laboratory By: (Signature) <i>Di [Signature]</i>		Date <i>09/10/90</i>	Time <i>1400</i>	Remarks:				

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO.		PROJECT NAME/LOCATION			NO. OF CONTAINERS	ANALYSIS REQUIRED					SHIP TO:		
718-9A		2 HAYWARD PARCELS				3	<div style="border: 1px solid black; padding: 2px;"> (OIL & GREASE) 503 D & E </div>					J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920	
SAMPLER(S): (Signature)					REMARKS								
													
DATE	TIME	SAMPLE DESCRIPTION											
10/3/90	9:00	SS-1, 0°-0 ⁵ , 0 ⁵ -1 ⁰ , 1 ⁰ -1 ⁵			3	+						ANALYZE EACH SAMPLE SEPARATELY FOR A TOTAL OF 45 SAMPLES 1 WEEK TURNAROUND FOR ALL SAMPLES SAVE ALL SAMPLE THAT IS UNUSED, ADDITIONAL ANALYSIS MAY BE REQUIRED AT A LATER TIME.	
	9:45	SS-2			3	+							
	10:30	SS-3			3	+							
	11:15	SS-4			3	+							
	11:45	SS-5			3	+							
	12:15	SS-6			3	+							
	12:45	SS-7			3	+							
	1:15	SS-8			3	+							
	1:45	SS-9			3	+							
	2:15	SS-10			3	+							
	3:30	SS-11			3	+							
	4:00	SS-12			3	+							
	5:00	SS-13			3	+							
	6:00	SS-14			3	+							
	7:00	SS-15			3	+							
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)			
		10/3/90	2040										
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:					
						10/3/90	2040						

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

EPA 8015 MODIFIED

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:			
718-9A		2 - HAYWARD PARCELS			TPH-GAS	BTEX	TPH-DIESEL	OIL & GREASE	SO3 D+E	CHROMATOGRAPHY	J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920			
SAMPLER(S): (Signature)				DATE	TIME	SAMPLE DESCRIPTION							REMARKS	
Jason Foster													REMARKS	
10/4/90	9:30	AF-3	GROUND WATER	5	X	X	X	X					3 WEEK TURNAROUND	
	11:00	AF-1		3	X	X								
	12:00	AF-2		3	X	X								
	1:15	AF-4		3	X	X								
	2:00	AF-5		3	X	X								
10/3/90	5:30	HP-13		4	X		X	X					HOLD	
10/2	0910	TRIP BLANK												
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)				
Jason Foster		10/4/90	7:00											
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:						
SEQUOIA						10/4/90	1900							

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO. 718-9A		PROJECT NAME/LOCATION Two Hayward Parcels			NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO: J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920			
SAMPLER(S): (Signature) <i>Jason Foster</i>						1	<div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;"> ALL GREASE (SO3 D+E) </div>						REMARKS		
DATE	TIME	SAMPLE DESCRIPTION											Normal TURNAROUND		
10-3	—	SS-5 0°-05 SOIL													
Relinquished by: (Signature) <i>Jason Foster</i>		Date 10/5/90	Time 8:00 AM	Received By: (Signature) _____		Relinquished by: (Signature) _____		Date	Time	Received By: (Signature) _____					
Laboratory of Record: ANAMETRIX		Date	Time	Received for Laboratory By: (Signature) <i>Neil</i>		Date 10/10/90	Time 0800	Remarks:							

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO. 718-9A		PROJECT NAME/LOCATION Two Hayward Parcels			NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:	
SAMPLER(S): (Signature) <i>Jason Foster</i>						Oil + Grease (503 DFE)						J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920	
DATE	TIME	SAMPLE DESCRIPTION			REMARKS								
10/9/90	9:45	SS-2, 1 ^s -2, Soil			1	X							1 week TAT
		SS-2, 2 ^o -2 ^s			1								
		SS-2, 2 ^s -3 ^o			1								
		SS-2, 3 ^o -3 ^s			1								
	✓	SS-2, 3 ^s -4			1								
	10:30	SS-3, 1 ^s -2			1								
		SS-3, 2-2 ^s			1								
	✓	SS-3, 2 ^s -3			1								
	1:45	SS-9, 1 ^s -2			1								
		SS-9, 2-2 ^s			1								
		SS-9, 2 ^s -3			1								
		SS-9, 3-3 ^s			1								
✓	✓	SS-9, 3 ^s -4			1	✓							
Relinquished by: (Signature) <i>Jason Foster</i>		Date 10/11/90	Time 9:35	Received By: (Signature) <i>Peter Seffler</i>		Relinquished by: (Signature) <i>Peter Seffler</i>		Date 10/11/90	Time 10:20	Received By: (Signature) <i>Jim McK...</i>			
Laboratory of Record: SEQUOIA		Date 10/11/90	Time 11:38	Received for Laboratory By: (Signature) <i>...</i>		Date	Time	Remarks:					

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED							SHIP TO:						
SAMPLER (S): (Signature)		DATE			TIME		SAMPLE DESCRIPTION		TTLc+STLC Lead							REMARKS		
718-9A		Two Hayward Parcels / Hayward		1												J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
<i>[Signature]</i>		10/3/90			9:00		SS-1, 0 ^s -1, soil		X							1 week TAT		
					9:45		SS-2, 0 ^s -1		X									
					10:30		SS-3, 0 ^s -1		X									
					11:45		SS-5, 0 ^s -1		X									
					1:45		SS-9, 0 ^o -0 ^s		X									
					3:00		SS-11, 0 ^o -0 ^s		X									
					4:00		SS-12, 0 ^o -0 ^s		X									
				7:00		SS-15, 0 ^o -0 ^s		X										
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)								
<i>N/A</i>		10/3/90		<i>N/A</i>														
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:										

CHAIN OF CUSTODY REPORT

10-153-0

CLIENT: J.V. Wisney					REPORT TO: Peter Laffoe					TURNAROUND TIME:			
ADDRESS: 145 Addison Ave Palo Alto, CA 94301					BILLING TO:					18 HR.			
PHONE: 328-6920										24 HR.	48 HR.	72 HR.	
PROJECT NAME/SITE:					PO#/BILLING REFERENCE:					5 DAY	10 DAY	15 DAY	
SAMPLER:			DATE:		ANALYSIS REQUESTED							REMARKS	SAMPLE NUMBER
SAMPLE ID#/STATION	SAMPLE DESCRIPTION	NUMBER OF CONT.	TYPE CONT.	SAMPLING TIME/DATE									
SS-1	0-0.5'	1		010584								15804	
SS-2	0-0.5'	1		0582								05	
SS-8	0-0.5'	1		0605								06	
SS-10	0-0.5'	1		0611								07	
SS-13	0-0.5'	1		0620								08	
RELINQUISHED BY: [Signature]					DATE: 10/11/90	TIME: 1415	RECEIVED BY: U.P.S.					TRAVEL TIME:	
RELINQUISHED BY:					DATE:	TIME:	RECEIVED BY: [Signature]					ON SITE TIME:	
RELINQUISHED BY:					DATE:	TIME:	RECEIVED IN LAB BY:					OTHER:	
										WERE SAMPLES PRESERVED ?	YES	NO	
										IN GOOD CONDITION?			



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: #718-9, Two Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 007-0847

Sampled: Jul 5, 1990
Received: Jul 5, 1990
Extracted: Jul 13, 1990
Analyzed: Jul 16, 1990
Reported: Jul 24, 1990

TOTAL RECOVERABLE PETROLEUM OIL

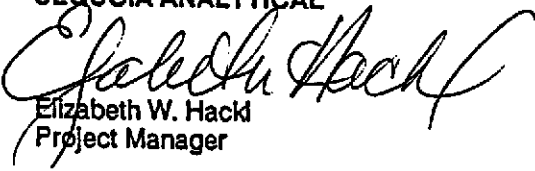
Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
007-0847	AF-1, 0.5-1.0	N.D.
007-0848	AF-1, 4.5-5.0	N.D.
007-0849	AF-2, 0.5-1.0	700
007-0850	AF-2, 4.5-5.0	N.D.
007-0851	AF-3, 0.5-1.0	N.D.
007-0852	AF-3, 4.0-4.5	N.D.

Detection Limits:

30

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

SEQUOIA ANALYTICAL


Elizabeth W. Hack
Project Manager

70847.JVL <1>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: #718-9, 2 Hayward Parcels Matrix Descript: Soil Analysis Method: SM 503 D&E (Gravimetric) First Sample #: 007-1016	Sampled: Jul 6, 1990 Received: Jul 6, 1990 Extracted: Jul 13, 1990 Analyzed: Jul 16, 1990 Reported: Jul 25, 1990
---------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------

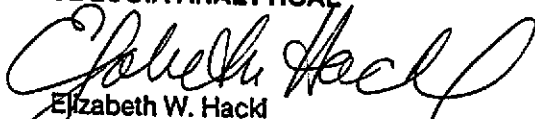
TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
007-1016	AF-4, 0.5-1	6,800
007-1017	AF-4, 4.0-4.5	N.D.
007-1018	AF-5, 0.5-1	6,800
007-1019	AF-5, 4.0-4.5	N.D.
007-1020	EB-4, 0.5-1	N.D.
007-1021	EB-5, 0.5-1	80
007-1022	EB-2, 0.5-1	2,500
007-1023	EB-1, 0.5-1	1,400
007-1024	EB-3, 0.5-1	210

Detection Limits: 30

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

SEQUOIA ANALYTICAL


Elizabeth W. Hack
Project Manager



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(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: #718-9, Two Hayward Parcels Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 007-0847	Sampled: Jul 5, 1990 Received: Jul 5, 1990 Analyzed: Jul 19, 1990 Reported: Jul 24, 1990
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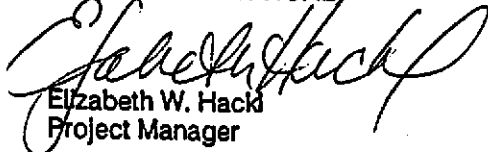
TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
007-0847	AF-1, 0.5-1.0	N.D.	0.0065	N.D.	N.D.	0.0083
007-0848	AF-1, 4.5-5.0	N.D.	0.0091	N.D.	N.D.	0.0065
007-0849	AF-2, 0.5-1.0	N.D.	N.D.	0.0023	N.D.	0.012
007-0850	AF-2, 4.5-5.0	N.D.	0.0062	0.0054	N.D.	0.0094
007-0851	AF-3, 0.5-1.0	N.D.	0.0083	N.D.	N.D.	0.0069
007-0852	AF-3, 4.0-4.5	N.D.	0.0062	N.D.	N.D.	N.D.

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Elizabeth W. Hack
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: #718-9, 2 Hayward Parcels Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 007-1016	Sampled: Jul 6, 1990 Received: Jul 6, 1990 Analyzed: Jul 20, 1990 Reported: Jul 25, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
007-1016	AF-4, 0.5-1	N.D.	N.D.	0.0060	N.D.	0.024
007-1017	AF-4, 4.0-4.5	N.D.	N.D.	N.D.	N.D.	0.0056
007-1018	AF-5, 0.5-1	N.D.	N.D.	0.011	N.D.	0.010
007-1019	AF-5, 4.0-4.5	N.D.	N.D.	0.0061	N.D.	0.0058
007-1020	EB-4, 0.5-1	N.D.	N.D.	0.0053	N.D.	0.0065
007-1021	EB-5, 0.5-1	N.D.	N.D.	N.D.	N.D.	N.D.
007-1022	EB-2, 0.5-1	N.D.	0.014	0.013	N.D.	0.0083
007-1023	EB-1, 0.5-1	N.D.	N.D.	1.3	0.014	0.0054
007-1024	EB-3, 0.5-1	N.D.	N.D.	0.0070	N.D.	0.0053

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

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Elizabeth W. Hack
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: #718-9, Two Hayward Parcels

QC Sample Group: 0070847 - 0070852

Reported: Jul 24, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Oil & Grease	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	SM503D&E	EPA 8020/8015	EPA 8020/8015	EPA 8020/8015	EPA 8020/8015
Analyst:	M.K.	M. Lari	M. Lari	M. Lari	M. Lari
Reporting Units:	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Date Analyzed:	Jul 16, 1990	Jul 19, 1990	Jul 19, 1990	Jul 19, 1990	Jul 19, 1990
QC Sample #:	007-0847	007-1200	007-1200	007-1200	007-1200
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	6,200	0.20	0.20	0.20	0.60
Conc. Matrix Spike:	4,200	0.19	0.19	0.21	0.63
Matrix Spike % Recovery:	68	95	95	110	110
Conc. Matrix Spike Dup.:	4,100	0.19	0.19	0.21	0.64
Matrix Spike Duplicate % Recovery:	66	95	95	110	110
Relative % Difference:	2.0	0.0	0.0	0.0	1.6

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Elizabeth W. Hack
Elizabeth W. Hack
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: #718-9, 2 Hayward Parcels QC Sample Group: 0071016 - 0071024	Reported: Jul 25, 1990
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QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Oi & Grease
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	SM503D&E
Analyst:	E. Gloria	E. Gloria	E. Gloria	E. Gloria	M. K.
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Jan 20, 1990	Jan 20, 1990	Jan 20, 1990	Jan 20, 1990	Jul 16, 1990
QC Sample #:	007-3513	007-3513	007-3513	007-3513	007-0847
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	0.20	0.20	0.20	0.60	6,200
Conc. Matrix Spike:	0.18	0.18	0.19	0.56	4,200
Matrix Spike % Recovery:	90	90	95	93	68
Conc. Matrix Spike Dup.:	0.19	0.19	0.19	0.59	4,100
Matrix Spike Duplicate % Recovery:	95	95	95	98	66
Relative % Difference:	5.4	5.4	0.0	5.2	2.0

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: #718-9, 2 Hayward Parcels Matrix Descript: Water Analysis Method: SM 503 A&E (Gravimetric) First Sample #: 007-1741 D	Sampled: Jul 11, 1990 Received: Jul 12, 1990 Extracted: Jul 17, 1990 Analyzed: Jul 18, 1990 Reported: Jul 24, 1990
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TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
0071741 D	AF-5	N.D.
0071742 D	AF-1	N.D.
0071743 D	AF-3	N.D.
0071744 D	AF-2	N.D.
0071745 D	AF-4	N.D.

Detection Limits: 5.0

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

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Elizabeth W. Hackl
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: #718-9, 2 Hayward Parcels Matrix Descript: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 007-1741	Sampled: Jul 11, 1990 Received: Jul 12, 1990 Analyzed: Jul 12, 1990 Reported: Jul 24, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons	Benzene	Toluene	Ethyl Benzene	Xylenes
		$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)
0071741 A-C	AF-5	N.D.	N.D.	N.D.	N.D.	N.D.
0071742 A-C	AF-1	N.D.	N.D.	N.D.	N.D.	N.D.
0071743 A-C	AF-3	N.D.	N.D.	N.D.	N.D.	N.D.
0071744 A-C	AF-2	N.D.	N.D.	N.D.	N.D.	N.D.
0071745 A-C	AF-4	N.D.	N.D.	N.D.	N.D.	N.D.
0071746 A-C	AF-6	N.D.	N.D.	N.D.	N.D.	N.D.
007-1747	Travel Blank	N.D.	N.D.	N.D.	N.D.	N.D.

Detection Limits:	30	0.30	0.30	0.30	0.30
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard. Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: #718-9, 2 Hayward Parcels

QC Sample Group: 0071741 - 0071747

Reported: Jul 24, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Oil & Grease
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	SM503A&E
Analyst:	E. Gloria	E. Gloria	E. Gloria	E. Gloria	L. Laikhtman
Reporting Units:	µg/L	µg/L	µg/L	µg/L	mg/L
Date Analyzed:	Jul 12, 1990	Jul 12, 1990	Jul 12, 1990	Jul 12, 1990	Jul 18, 1990
QC Sample #:	007-1085	007-1085	007-1085	007-1085	BLK071190
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	2.0	2.0	2.0	6.0	100
Conc. Matrix Spike:	2.1	2.0	2.0	5.9	81
Matrix Spike % Recovery:	110	100	100	98	81
Conc. Matrix Spike Dup.:	2.0	1.9	1.9	5.7	84
Matrix Spike Duplicate % Recovery:	100	95	95	95	8.4
Relative % Difference:	4.9	5.1	5.1	3.4	4.0

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Elizabeth W. Hack
Elizabeth W. Hack
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-1 Analysis Method: EPA 8240 Lab Number: 009-0793 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethane.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-1
Analysis Method: EPA 8240 & "Open Scan"
Lab Number: 009-0793 A-C

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 16, 1990
Reported: Sep 26, 1990

VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-2 Analysis Method: EPA 8240 Lab Number: 009-0794 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

M. A. McBirney
 Malle A. McBirney
 Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-2 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 009-0794 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-3 Analysis Method: EPA 8240 Lab Number: 009-0795 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-3
Analysis Method: EPA 8240 & "Open Scan"
Lab Number: 009-0795 A-C


Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 16, 1990
Reported: Sep 26, 1990

VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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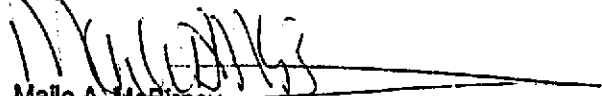
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-4 Analysis Method: EPA 8240 Lab Number: 009-0796 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-4 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 009-0796 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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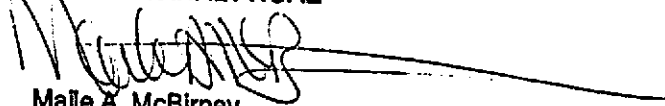
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-5 Analysis Method: EPA 8240 Lab Number: 009-0797 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

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Male A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-5
Analysis Method: EPA 8240 & "Open Scan"
Lab Number: 009-0797 A-C

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 16, 1990
Reported: Sep 26, 1990

VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Malle A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Method (units): EPA 8240 (µg/L purged)
Analyst(s): S. Fong
QC Sample #: 009-1287

Analyzed: Sep 14, 1990
Reported: Sep 27, 1990

QUALITY CONTROL DATA REPORT

Analyte	Sample Conc.	Spike Conc. Added	Conc. Matrix Spike	Matrix Spike % Recovery	Conc. Matrix Spike Duplicate	Matrix Spike Duplicate % Recovery	Relative % Difference
1,1-Dichloroethene	N.D.	50	40	80	43	86	7.2
Trichloroethene	N.D.	50	45	90	48	96	6.5
Benzene	N.D.	50	44	88	47	94	6.6
Toluene	N.D.	50	47	94	49	98	4.2
Chlorobenzene	N.D.	50	49	98	52	104	5.9

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Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-1 Analysis Method: EPA 8270 Lab Number: 009-0793 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-1 Analysis Method: EPA 8270 Lab Number: 009-0793	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	10	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	2.0	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	10	N.D.
N-Nitrosodiphenylamine.....	2.0	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	10	N.D.
Phenanthrene.....	2.0	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	10	N.D.
2,4,6-Trichlorophenol.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-1 Analysis Method: EPA 8270 & "Open Scan" Lab Number: 009-0793 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Malle A. McBirney
Project Manager

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-2
Analysis Method: EPA 8270
Lab Number: 009-0794 I

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-2
Analysis Method: EPA 8270
Lab Number: 009-0794 I

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	10	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	2.0	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	10	N.D.
N-Nitrosodiphenylamine.....	2.0	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	10	N.D.
Phenanthrene.....	2.0	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	10	N.D.
2,4,6-Trichlorophenol.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-2 Analysis Method: EPA 8270 & "Open Scan" Lab Number: 009-0794 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
Unidentifiable Compounds	2.0	300

No additional peaks > 2 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-3
Analysis Method: EPA 8270
Lab Number: 009-0795 I

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-3
Analysis Method: EPA 8270
Lab Number: 009-0795

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	10	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	2.0	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	10	N.D.
N-Nitrosodiphenylamine.....	2.0	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	10	N.D.
Phenanthrene.....	2.0	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	10	N.D.
2,4,6-Trichlorophenol.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-3
Analysis Method: EPA 8270 & "Open Scan"
Lab Number: 009-0795 I

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-4
Analysis Method: EPA 8270
Lab Number: 009-0796 I

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-4
Analysis Method: EPA 8270
Lab Number: 009-0796 I

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	10	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	2.0	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	10	N.D.
N-Nitrosodiphenylamine.....	2.0	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	10	N.D.
Phenanthrene.....	2.0	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	10	N.D.
2,4,6-Trichlorophenol.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-4 Analysis Method: EPA 8270 & "Open Scan" Lab Number: 009-0796 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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Unidentifiable Compounds.....	2.0	330
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No additional peaks > 2 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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[Signature]
Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-5
Analysis Method: EPA 8270
Lab Number: 009-0797 I

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-5
Analysis Method: EPA 8270
Lab Number: 009-0797

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	2.0	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	10	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	2.0	N.D.
N-Nitrosodiphenylamine.....	10	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	2.0	N.D.
Phenanthrene.....	10	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	2.0	N.D.
2,4,6-Trichlorophenol.....	10	N.D.
	2.0	N.D.

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

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-5 Analysis Method: EPA 8270 & "Open Scan" Lab Number: 009-0797 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
Unidentifiable Compounds	2.0	28

No additional peaks $> 2 \mu\text{g/L}$ were identified by the Mass Spectral Library.

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Malle A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Method: EPA 8270
Analyst(s): T. Fowler
QC Sample #: BLK091290

Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

QUALITY CONTROL DATA REPORT

Analyte	Sample Conc.	Spike Conc. Added	Conc. Matrix Spike	Matrix Spike % Recovery	Conc. Matrix Spike Duplicate	Matrix Spike Duplicate % Recovery	Relative % Difference
Phenol	N.D.	100	30	30	33	33	9.5
2-Chlorophenol	N.D.	100	61	61	66	66	7.9
1,4-Dichloro-benzene	N.D.	50	25	50	28	56	11
N-Nitroso-DI-N-propylamine	N.D.	50	33	66	33	66	0
1,2,4-Trichloro-benzene	N.D.	50	26	52	28	56	7.4
4-Chloro-3-Methylphenol	N.D.	100	66	66	72	72	8.7
Acenaphthene	N.D.	50	32	64	33	66	3.2
4-Nitrophenol	N.D.	100	25	25	31	31	21
2,4-Dinitro-toluene	N.D.	50	39	78	40	80	2.5
Pentachloro-phenol	N.D.	100	68	68	76	76	11
Pyrene	N.D.	50	56	112	59	48	5.2

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Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-1 Analysis Method: EPA 8080 Lab Number: 009-0793 H	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 14, 1990 Analyzed: Sep 14, 1990 Reported: Sep 26, 1990
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ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor epoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

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Maile A. McBirney
Project Manager



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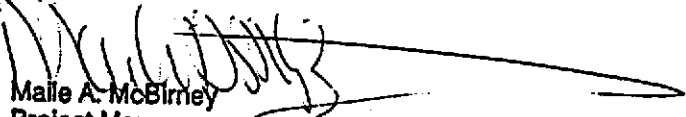
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-2 Analysis Method: EPA 8080 Lab Number: 009-0794 H	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 14, 1990 Analyzed: Sep 14, 1990 Reported: Sep 26, 1990
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ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor epoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-3
Analysis Method: EPA 8080
Lab Number: 009-0795 H

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 14, 1990
Analyzed: Sep 14, 1990
Reported: Sep 26, 1990

ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor epoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-4 Analysis Method: EPA 8080 Lab Number: 009-0796 H	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 14, 1990 Analyzed: Sep 14, 1990 Reported: Sep 26, 1990
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ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor epoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-5
Analysis Method: EPA 8080
Lab Number: 009-0797 H

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 14, 1990
Analyzed: Sep 14, 1990
Reported: Sep 26, 1990

ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor epoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

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145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels

Sep 7, 1990

QC Sample Group: 0090793-7

Reported: Sep 26, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	gamma - BHC	Aldrin	Dieldrin
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Method:	EPA 8080	EPA 8080	EPA 8080
Analyst:	D. Tran	D. Tran	D. Tran
Reporting Units:	µg/L	µg/L	µg/L
Date Analyzed:	Sep 14, 1990	Sep 14, 1990	Sep 14, 1990
QC Sample #:	Blank	Blank	Blank

Sample Conc.:	N.D.	N.D.	N.D.
---------------	------	------	------

Spike Conc. Added:	10	10	20
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Conc. Matrix Spike:	8.9	8.7	18
---------------------	-----	-----	----

Matrix Spike % Recovery:	89	87	90
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Conc. Matrix Spike Dup.:	10	9.0	18
--------------------------	----	-----	----

Matrix Spike Duplicate % Recovery:	100	90	90
------------------------------------	-----	----	----

Relative % Difference:	12	3.4	0
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SEQUOIA ANALYTICAL

M. A. McBirney
Maile A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
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Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-1
Lab Number: 009-0793 E

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 14, 1990
Reported: Sep 26, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Antimony.....	500	N.D.
Arsenic.....	100	180
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	190
Copper.....	10	92
Lead.....	50.0	N.D.
Mercury.....	0.2	N.D.
Nickel.....	50	N.D.
Selenium.....	50	100
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	200

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

SEQUOIA ANALYTICAL

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-2
Lab Number: 009-0794 E

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 14, 1990
Reported: Sep 26, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit $\mu\text{g/L}$ (ppb)	Sample Results $\mu\text{g/L}$ (ppb)
Antimony.....	500	N.D.
Arsenic.....	50	58
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	62
Copper.....	10	24
Lead.....	50.0	N.D.
Mercury.....	0.2	N.D.
Nickel.....	50	94
Selenium.....	50	N.D.
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	64

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

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Malle A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-3
Lab Number: 009-0795 E

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 14, 1990
Reported: Sep 26, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Antimony.....	500	N.D.
Arsenic.....	50	120
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	190
Copper.....	10	120
Lead.....	50.0	N.D.
Mercury.....	0.2	N.D.
Nickel.....	50	190
Selenium.....	50	63
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	250

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

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J.V. Lowney & Associates	Client Project ID: P3723, Two Hayward Parcels	Sampled: Sep 7, 1990
145 Addison Avenue	Sample Descript: Water, AF-4	Received: Sep 7, 1990
Palo Alto, CA 94301		Analyzed: Sep 18, 1990
Attention: Peter Leffler	Lab Number: 009-0796 E	Reported: Sep 26, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Antimony.....	500	N.D.
Arsenic.....	50	99
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	230
Copper.....	10	90
Lead.....	25.0	25
Mercury.....	0.2	N.D.
Nickel.....	50	350
Selenium.....	50	55
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	280

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

SEQUOIA ANALYTICAL

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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-5
Lab Number: 009-0797 E

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 18, 1990
Reported: Sep 26, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Antimony.....	500	N.D.
Arsenic.....	50	120
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	770
Copper.....	10	380
Lead.....	25.0	130
Mercury.....	0.2	0.63
Nickel.....	50	980
Selenium.....	50	N.D.
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	820

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

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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels

Sep 7, 1990

QC Sample Group: 0090793-7

Reported: Sep 26, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Antimony	Beryllium	Cadmium	Chromium	Copper	Nickel	Silver
Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	B. Oliver	B. Oliver	B. Oliver	B. Oliver	B. Oliver	B. Oliver	B. Oliver
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990
QC Sample #:	009-0886	009-0886	009-0886	009-0886	009-0886	009-0886	009-0886
Sample Conc.:	N.D.	N.D.	N.D.	0.042	0.046	0.13	N.D.
Spike Conc. Added:	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Conc. Matrix Spike:	1.1	0.85	0.89	0.98	1.1	0.96	0.89
Matrix Spike % Recovery:	110	85	89	94	100	83	89
Conc. Matrix Spike Dup.:	1.1	0.97	0.84	0.85	1.0	0.97	0.92
Matrix Spike Duplicate % Recovery:	110	97	84	81	98	84	92
Relative % Difference:	0	14	5.8	14	9.5	1.0	3.3

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels

Sep 7, 1990

QC Sample Group: 0090793-7

Reported: Sep 26, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Thallium	Zinc	Arsenic	Selenium	Mercury	Lead
Method:	EPA 6010	EPA 6010	EPA 206.2	EPA 206.2	EPA 245.1	EPA 7421
Analyst:	B. Oliver	B. Oliver	S. Foster	S. Foster	R. Eastman	R. Britton
Reporting Units:	mg/L	mg/L	µg/L	µg/L	mg/L	mg/L
Date Analyzed:	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 14, 1990	Sep 18, 1990
QC Sample #:	009-0886	009-0886	009-0315	009-0315	009-1457	009-0610
Sample Conc.:	N.D.	N.D.	6.0	N.D.	N.D.	N.D.
Spike Conc. Added:	1.0	1.0	50	50	0.0020	0.10
Conc. Matrix Spike:	0.89	0.99	46	46	0.0020	0.094
Matrix Spike % Recovery:	89	99	80	92	97	94
Conc. Matrix Spike Dup.:	0.89	1.0	46	47	0.0019	0.097
Matrix Spike Duplicate % Recovery:	89	100	80	94	94	97
Relative % Difference:	0	1.0	0	2.2	3.7	3.1

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water Analysis for: Cyanide First Sample #: 009-0793 F	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 22, 1990 Reported: Sep 26, 1990
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LABORATORY ANALYSIS FOR: Cyanide

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
0090793 F	AF-1	0.10	N.D.
0090794 F	AF-2	0.10	N.D.
0090795 F	AF-3	0.10	N.D.
0090796 F	AF-4	0.10	N.D.
0090797 F	AF-5	0.10	N.D.

J. V. LOWNEY ASSOC.

OCT 2 1990

RECEIVED

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager

90793.JVL <1>



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels

Sep 7, 1990

QC Sample Group: 0090793-7

Reported: Sep 26, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Cyanide
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Method: EPA 335.3
 Analyst: A. Singh
 Reporting Units: mg/L
 Date Analyzed: Sep 22, 1990
 QC Sample #: 009-0640

Sample Conc.: N.D.

Spike Conc. Added: 0.38

Conc. Matrix Spike: 0.38

Matrix Spike % Recovery: 100

Conc. Matrix Spike Dup.: 0.36

Matrix Spike Duplicate % Recovery: 94

Relative % Difference: 6.0

SEQUOIA ANALYTICAL

Malle A. McBirney
 Malle A. McBirney
 Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water Analysis Method: Polarized Light Microscopy First Sample #: 009-0793 D	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 14, 1990 Reported: Sep 26, 1990
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ASBESTOS ANALYSIS

Sample Number	Sample Description	Detection Limit fibers/L	Sample Result fibers/L	Asbestos Type (if present)
0090793 D	AF-1	1.0	N.D.	-
0090794 D	AF-2	1.0	N.D.	-
0090795 D	AF-3	1.0	N.D.	-
0090796 D	AF-4	1.0	N.D.	-
0090797 D	AF-5	1.0	N.D.	-

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Matrix Descript: Water
Analysis Method: SM 503 A&E (Gravimetric)
First Sample #: 009-0793 G

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 10, 1990
Analyzed: Sep 11, 1990
Reported: Sep 26, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
0090793 G	AF-1	N.D.
0090794 G	AF-2	6.0
0090795 G	AF-3	15
0090796 G	AF-4	N.D.
0090797 G	AF-5	N.D.

Detection Limits:

5.0

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

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Maile A. McBirney
Project Manager

90793.JVL <4>



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels

Sep 7, 1990

QC Sample Group: 9989683-7

Reported: Sep 26, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Total Recoverable Petroleum Oil
---------	------------------------------------

Method: SM503 A&E
 Analyst: L. Laikhtman
 Reporting Units: mg/L
 Date Analyzed: Sep 11, 1990
 QC Sample #: BLK 9/10/90

Sample Conc.: N.D.

Spike Conc.
Added: 100

Conc. Matrix
Spike: 98

Matrix Spike
% Recovery: 98

Conc. Matrix
Spike Dup.: 97

Matrix Spike
Duplicate
% Recovery: 97

Relative
% Difference: 1.0

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-0584

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 9, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-0584	SS-1 @ 0'-0.5'	390
010-0585	SS-1 @ 0.5'-1'	180
010-0586	SS-1 @ 1'-1.5'	N.D.
010-0587	SS-2 @ 0'-0.5'	2,700
010-0588	SS-2 @ 0.5'-1'	3,400
010-0589	SS-2 @ 1'-1.5'	5,200
010-0590	SS-3 @ 0'-0.5'	N.D.
010-0591	SS-3 @ 0.5'-1'	380
010-0592	SS-3 @ 1'-1.5'	460
010-0593	SS-4 @ 0'-0.5'	210

J. V. LOWNEY ASSOC.

OCT 12 1990

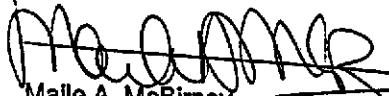
ED

Detection Limits:

30

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



SEQUOIA ANALYTICAL

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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-0594

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 9, 1990


TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-0594	SS-4 @ 0.5'-1'	90
010-0595	SS-4 @ 1'-1.5'	N.D.
010-0596	SS-5 @ 0'-0.5'	120
010-0597	SS-5 @ 0.5'-1'	N.D.
010-0598	SS-5 @ 1'-1.5'	N.D.
010-0599	SS-6 @ 0'-0.5'	260
010-0600	SS-6 @ 0.5'-1'	40
010-0601	SS-6 @ 1'-1.5'	N.D.
010-0602	SS-7 @ 0'-0.5'	340
010-0603	SS-7 @ 0.5'-1'	N.D.

Detection Limits: 30

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-0604

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 9, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-0604	SS-7 @ 1'-1.5'	N.D.
010-0605	SS-8 @ 0'-0.5'	2,600
010-0606	SS-8 @ 0.5'-1'	250
010-0607	SS-8 @ 1'-1.5'	N.D.
010-0608	SS-9 @ 0'-0.5'	1,700
010-0609	SS-9 @ 0.5'-1'	980
010-0610	SS-9 @ 1'-1.5'	360
010-0611	SS-10 @ 0'-0.5'	1,300
010-0612	SS-10 @ 0.5'-1'	N.D.
010-0613	SS-10 @ 1'-1.5'	N.D.

Detection Limits:

30

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-0624

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 9, 1990

TOTAL RECOVERABLE PETROLEUM OIL

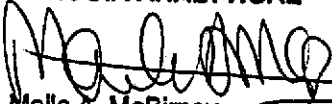
Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-0624	SS-14 @ 0.5'-1'	N.D.
010-0625	SS-14 @ 1'-1.5'	N.D.
010-0626	SS-15 @ 0'-0.5'	N.D.
010-0627	SS-15 @ 0.5'-1'	N.D.
010-0629	SS-15 @ 1'-1.5'	N.D.

Detection Limits:

30

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 001-0614

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 9, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
001-0614	SS-11 @ 0'-0.5'	N.D.
001-0615	SS-11 @ 0.5'-1'	N.D.
001-0616	SS-11 @ 1'-1.5'	N.D.
001-0617	SS-12 @ 0'-0.5'	620
001-0618	SS-12 @ 0.5'-1'	250
001-0619	SS-12 @ 1'-1.5'	N.D.
001-0620	SS-13 @ 0'-0.5'	4,000
001-0621	SS-13 @ 0.5'-1'	260
001-0622	SS-13 @ 1'-1.5'	N.D.
001-0623	SS-14 @ 0'-0.5'	67

Detection Limits:

30

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

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group: 010-0584 -100628

Reported: Oct 9, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Total Oil & Grease	Total Oil & Grease	Total Oil & Grease
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Method:	SM503D&E	SM503D&E	SM503D&E
Analyst:	LL	LL	LL
Reporting Units:	mg/kg	mg/kg	mg/kg
Date Analyzed:	Oct 4, 1990	Oct 5, 1990	Oct 4, 1990
QC Sample #:	BLK10490	010-0602	BLK10490
Sample Conc.:	N.D.	340	N.D.
Spike Conc. Added:	5,000	5,600	5,600
Conc. Matrix Spike:	4,400	4,200	5,000
Matrix Spike % Recovery:	88	69	89
Conc. Matrix Spike Dup.:	4,000	4,000	5,200
Matrix Spike Duplicate % Recovery:	80	65	93
Relative % Difference:	9.5	5.4	3.9

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: 2 Hayward Parcels
Matrix Descript: Soil, 718-9A
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-1617

Sampled: Oct 3, 1990
Received: Oct 11, 1990
Extracted: Oct 15, 1990
Analyzed: Oct 15, 1990
Reported: Oct 16, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-1617	SS-2@1.5'-2'	100
010-1618	SS-2@2'-2.5'	N.D.
010-1619	SS-2@2.5'-3'	N.D.
010-1620	SS-2@3'-3.5'	N.D.
010-1621	SS-2@3.5'-4'	190
010-1622	SS-3@1.5'-2'	N.D.
010-1623	SS-3@2'-2.5'	49
010-1624	SS-3@2.5'-3'	300
010-1625	SS-9@1.5'-2'	N.D.
010-1626	SS-9@2'-2.5'	N.D.

J. V. LOWNEY ASSOC.

OCT 18 1990

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Detection Limits:

30.0

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager

101617.JVL <1>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: 2 Hayward Parcels Matrix Descript: Soil, 718-9A Analysis Method: SM 503 D&E (Gravimetric) First Sample #: 010-1627	Sampled: Oct 3, 1990 Received: Oct 11, 1990 Extracted: Oct 15, 1990 Analyzed: Oct 15, 1990 Reported: Oct 16, 1990
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TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-1627	SS-9@2.5'-3'	N.D.
010-1628	SS-9@3'-3.5'	N.D.
010-1629	SS-9@3.5'-4'	N.D.

Detection Limits:	30.0
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Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: 2 Hayward Parcels
718-9A

QC Sample Group: 101617-29

Reported: Oct 16, 1990

QUALITY CONTROL DATA REPORT

ANALYTE

Total Oil & Grease

Method:	503 D&E
Analyst:	LL, S.G.
Reporting Units:	mg/kg
Date Analyzed:	Oct 15, 1990
QC Sample #:	010-1621

Sample Conc.: 190

Spike Conc. Added: 6000

Conc. Matrix Spike: 5500

Matrix Spike % Recovery: 89

Conc. Matrix Spike Dup.: 5800

Matrix Spike Duplicate % Recovery: 94

Relative % Difference: 5.3

SEQUOIA ANALYTICAL

Maire A. McBirney
Maire A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5
Analysis Method: EPA 8240
Lab Number: 010-0585 100588, 100591 & 10059

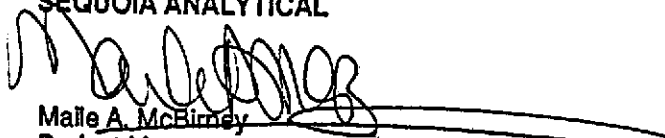
Sampled: Oct 3, 1990
Received: Oct 3, 1990
Analyzed: Oct 17, 1990
Reported: Oct 22, 1990

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acetone.....	500	N.D.
Benzene.....	100	N.D.
Bromodichloromethane.....	100	N.D.
Bromoform.....	100	N.D.
Bromomethane.....	100	N.D.
2-Butanone.....	500	N.D.
Carbon disulfide.....	100	N.D.
Carbon tetrachloride.....	100	N.D.
Chlorobenzene.....	100	N.D.
Chloroethane.....	100	N.D.
2-Chloroethyl vinyl ether.....	500	N.D.
Chloroform.....	100	N.D.
Chloromethane.....	100	N.D.
Dibromochloromethane.....	100	N.D.
1,1-Dichloroethane.....	100	N.D.
1,2-Dichloroethane.....	100	N.D.
1,1-Dichloroethene.....	100	N.D.
Total 1,2-Dichloroethene.....	100	N.D.
1,2-Dichloropropane.....	100	N.D.
cis 1,3-Dichloropropene.....	100	N.D.
trans 1,3-Dichloropropene.....	100	N.D.
Ethylbenzene.....	100	N.D.
2-Hexanone.....	500	N.D.
Methylene chloride.....	100	N.D.
4-Methyl-2-pentanone.....	500	N.D.
Styrene.....	100	N.D.
1,1,2,2-Tetrachloroethane.....	100	N.D.
Tetrachloroethene.....	100	N.D.
Toluene.....	100	N.D.
1,1,1-Trichloroethane.....	100	N.D.
1,1,2-Trichloroethane.....	100	N.D.
Trichloroethene.....	100	N.D.
Trichlorofluoromethane.....	100	N.D.
Vinyl acetate.....	100	N.D.
Vinyl chloride.....	100	N.D.
Total Xylenes.....	100	N.D.

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



SEQUOIA ANALYTICAL

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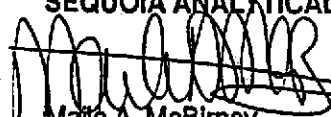
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 010-0585 100588, 100591 & 10059	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Reported: Oct 22, 1990
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VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
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No additional peaks > 250 $\mu\text{g}/\text{kg}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Marie A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates	Client Project ID: #718-9A, 2 Hayward Parcels	Sampled: Oct 3, 1990
145 Addison Avenue	Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11	Received: Oct 3, 1990
Palo Alto, CA 94301	Analysis Method: EPA 8240	Analyzed: Oct 17, 1990
Attention: Stason Foster	Lab Number: 001-0600 100603, 100606 & 10061	Reported: Oct 22, 1990

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acetone.....	500	N.D.
Benzene.....	100	N.D.
Bromodichloromethane.....	100	N.D.
Bromoform.....	100	N.D.
Bromomethane.....	100	N.D.
2-Butanone.....	500	N.D.
Carbon disulfide.....	100	N.D.
Carbon tetrachloride.....	100	N.D.
Chlorobenzene.....	100	N.D.
Chloroethane.....	100	N.D.
2-Chloroethyl vinyl ether.....	500	N.D.
Chloroform.....	100	N.D.
Chloromethane.....	100	N.D.
Dibromochloromethane.....	100	N.D.
1,1-Dichloroethane.....	100	N.D.
1,2-Dichloroethane.....	100	N.D.
1,1-Dichloroethene.....	100	N.D.
Total 1,2-Dichloroethene.....	100	N.D.
1,2-Dichloropropane.....	100	N.D.
cis 1,3-Dichloropropene.....	100	N.D.
trans 1,3-Dichloropropene.....	100	N.D.
Ethylbenzene.....	100	N.D.
2-Hexanone.....	500	N.D.
Methylene chloride.....	100	N.D.
4-Methyl-2-pentanone.....	500	N.D.
Styrene.....	100	N.D.
1,1,2,2-Tetrachloroethane.....	100	N.D.
Tetrachloroethene.....	100	N.D.
Toluene.....	100	N.D.
1,1,1-Trichloroethane.....	100	N.D.
1,1,2-Trichloroethane.....	100	N.D.
Trichloroethene.....	100	N.D.
Trichlorofluoromethane.....	100	N.D.
Vinyl acetate.....	100	N.D.
Vinyl chloride.....	100	N.D.
Total Xylenes.....	100	N.D.

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 001-0600 100603, 100606 & 10061	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Reported: Oct 22, 1990
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VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
---------	--------------------------------------------	-------------------------------------------

No additional peaks > 250 $\mu\text{g}/\text{kg}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5 Analysis Method: EPA 8270 Lab Number: 010-0585 100588, 100591 & 10059 QC Sample #:	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 11, 1990 Analyzed: Oct 16, 1990 Reported: Oct 22, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene.....	500	N.D.
Acenaphthylene.....	500	N.D.
Aniline.....	500	N.D.
Anthracene.....	500	N.D.
Benzidine.....	13,000	N.D.
Benzoic Acid.....	2,500	N.D.
Benzo(a)anthracene.....	500	N.D.
Benzo(b)fluoranthene.....	500	N.D.
Benzo(k)fluoranthene.....	500	N.D.
Benzo(g,h,i)perylene.....	500	N.D.
Benzo(a)pyrene.....	500	N.D.
Benzyl alcohol.....	500	N.D.
Bis(2-chloroethoxy)methane.....	500	N.D.
Bis(2-chloroethyl)ether.....	500	N.D.
Bis(2-chloroisopropyl)ether.....	500	N.D.
Bis(2-ethylhexyl)phthalate.....	2,500	N.D.
4-Bromophenyl phenyl ether.....	500	N.D.
Butyl benzyl phthalate.....	500	N.D.
4-Chloroaniline.....	500	N.D.
2-Chloronaphthalene.....	500	N.D.
4-Chloro-3-methylphenol.....	500	N.D.
2-Chlorophenol.....	500	N.D.
4-Chlorophenyl phenyl ether.....	500	N.D.
Chrysene.....	500	N.D.
Dibenz(a,h)anthracene.....	500	N.D.
Dibenzofuran.....	500	N.D.
Di-N-butyl phthalate.....	2,500	N.D.
1,3-Dichlorobenzene.....	500	N.D.
1,4-Dichlorobenzene.....	500	N.D.
1,2-Dichlorobenzene.....	500	N.D.
3,3-Dichlorobenzidine.....	2,500	N.D.
2,4-Dichlorophenol.....	500	N.D.
Diethyl phthalate.....	500	N.D.
2,4-Dimethylphenol.....	500	N.D.
Dimethyl phthalate.....	500	N.D.
4,6-Dinitro-2-methylphenol.....	2,500	N.D.
2,4-Dinitrophenol.....	2,500	N.D.



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5
Analysis Method: EPA 8270
Lab Number: 010-0585 100588, 100591 & 10059
QC Sample #:

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 11, 1990
Analyzed: Oct 16, 1990
Reported: Oct 22, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene.....	500	N.D.
2,6-Dinitrotoluene.....	500	N.D.
Di-N-octyl phthalate.....	500	N.D.
Fluoranthene.....	500	N.D.
Fluorene.....	500	N.D.
Hexachlorobenzene.....	500	N.D.
Hexachlorobutadiene.....	500	N.D.
Hexachlorocyclopentadiene.....	500	N.D.
Hexachloroethane.....	500	N.D.
Indeno(1,2,3-cd)pyrene.....	500	N.D.
Isophorone.....	500	N.D.
2-Methylnaphthalene.....	500	N.D.
2-Methylphenol.....	500	N.D.
4-Methylphenol.....	500	N.D.
Naphthalene.....	500	N.D.
2-Nitroaniline.....	2,500	N.D.
3-Nitroaniline.....	2,500	N.D.
4-Nitroaniline.....	2,500	N.D.
Nitrobenzene.....	500	N.D.
2-Nitrophenol.....	500	N.D.
4-Nitrophenol.....	2,500	N.D.
N-Nitrosodiphenylamine.....	500	N.D.
N-Nitroso-di-N-propylamine.....	500	N.D.
Pentachlorophenol.....	2,500	N.D.
Phenanthrene.....	500	N.D.
Phenol.....	500	N.D.
Pyrene.....	500	N.D.
1,2,4-Trichlorobenzene.....	500	N.D.
2,4,5-Trichlorophenol.....	2,500	N.D.
2,4,6-Trichlorophenol.....	500	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

M. J. McBirney
Maile J. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5
Analysis Method: EPA 8270 & "Open Scan"
Lab Number: 010-0585 100588, 100591 & 10059

Sampled: Oct 3, 1990
Received: Oct 3, 1990

Reported: Oct 22, 1990

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
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No additional peaks > 1250 $\mu\text{g}/\text{kg}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8270 Lab Number: 001-0600 100603, 100606 & 10061 QC Sample #:	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 11, 1990 Analyzed: Oct 16, 1990 Reported: Oct 22, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene.....	100	N.D.
Acenaphthylene.....	100	N.D.
Aniline.....	100	N.D.
Anthracene.....	100	N.D.
Benzidine.....	2,500	N.D.
Benzoic Acid.....	500	N.D.
Benzo(a)anthracene.....	100	N.D.
Benzo(b)fluoranthene.....	100	N.D.
Benzo(k)fluoranthene.....	100	N.D.
Benzo(g,h,i)perylene.....	100	N.D.
Benzo(a)pyrene.....	100	N.D.
Benzyl alcohol.....	100	N.D.
Bis(2-chloroethoxy)methane.....	100	N.D.
Bis(2-chloroethyl)ether.....	100	N.D.
Bis(2-chloroisopropyl)ether.....	100	N.D.
Bis(2-ethylhexyl)phthalate.....	500	N.D.
4-Bromophenyl phenyl ether.....	100	N.D.
Butyl benzyl phthalate.....	100	N.D.
4-Chloroaniline.....	100	N.D.
2-Chloronaphthalene.....	100	N.D.
4-Chloro-3-methylphenol.....	100	N.D.
2-Chlorophenol.....	100	N.D.
4-Chlorophenyl phenyl ether.....	100	N.D.
Chrysene.....	100	N.D.
Dibenz(a,h)anthracene.....	100	N.D.
Dibenzofuran.....	100	N.D.
Di-N-butyl phthalate.....	500	N.D.
1,3-Dichlorobenzene.....	100	N.D.
1,4-Dichlorobenzene.....	100	N.D.
1,2-Dichlorobenzene.....	100	N.D.
3,3-Dichlorobenzidine.....	500	N.D.
2,4-Dichlorophenol.....	100	N.D.
Diethyl phthalate.....	100	N.D.
2,4-Dimethylphenol.....	100	N.D.
Dimethyl phthalate.....	100	N.D.
4,6-Dinitro-2-methylphenol.....	500	N.D.
2,4-Dinitrophenol.....	500	N.D.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8270 Lab Number: 010-0600 100603, 100606 & 10061 QC Sample #:	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 11, 1990 Analyzed: Oct 16, 1990 Reported: Oct 22, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene.....	100	N.D.
2,6-Dinitrotoluene.....	100	N.D.
Di-N-octyl phthalate.....	100	N.D.
Fluoranthene.....	100	N.D.
Fluorene.....	100	N.D.
Hexachlorobenzene.....	100	N.D.
Hexachlorobutadiene.....	100	N.D.
Hexachlorocyclopentadiene.....	100	N.D.
Hexachloroethane.....	100	N.D.
Indeno(1,2,3-cd)pyrene.....	100	N.D.
Isophorone.....	100	N.D.
2-Methylnaphthalene.....	100	N.D.
2-Methylphenol.....	100	N.D.
4-Methylphenol.....	100	N.D.
Naphthalene.....	100	N.D.
2-Nitroaniline.....	500	N.D.
3-Nitroaniline.....	500	N.D.
4-Nitroaniline.....	500	N.D.
Nitrobenzene.....	100	N.D.
2-Nitrophenol.....	100	N.D.
4-Nitrophenol.....	500	N.D.
N-Nitrosodiphenylamine.....	100	N.D.
N-Nitroso-di-N-propylamine.....	100	N.D.
Pentachlorophenol.....	500	N.D.
Phenanthrene.....	100	N.D.
Phenol.....	100	N.D.
Pyrene.....	100	N.D.
1,2,4-Trichlorobenzene.....	100	N.D.
2,4,5-Trichlorophenol.....	500	N.D.
2,4,6-Trichlorophenol.....	100	N.D.

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

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M. A. McBirney
 Máile A. McBirney
 Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8270 & "Open Scan" Lab Number: 010-0600 100603, 100606 & 10061	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Reported: Oct 22, 1990
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SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
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No additional peaks > 250 $\mu\text{g}/\text{kg}$ were identified by the Mass Spectral Library.

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Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates	Client Project ID: #718-9A, 2 Hayward Parcels	Sampled: Oct 3, 1990
145 Addison Avenue	Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5	Received: Oct 3, 1990
Palo Alto, CA 94301		Extracted: Oct 12, 1990
Attention: Stason Foster	Lab Number: 010-0585 100585,100588 & 10059	Reported: Oct 22, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.0050	N.D.	500	0.25	N.D.
Arsenic	5	0.0050	0.095	500	0.25	7.5
Beryllium	0.75	0.010	N.D.	75	0.50	N.D.
Cadmium	1	0.010	N.D.	100	0.50	4.6
Chromium (III)	560	0.0050	0.8	2,500	0.25	290
Copper	25	0.010	1.3	2,500	0.50	380
Lead	5	0.0050	7.2	1,000	0.25	300
Mercury	0.2	0.00020	N.D.	20	0.010	0.089
Nickel	20	0.050	0.4	2,000	2.5	76
Selenium	1	0.0050	N.D.	100	0.25	0.37
Silver	5	0.010	N.D.	500	0.50	N.D.
Thallium	7	0.0050	N.D.	700	0.25	N.D.
Zinc	250	0.010	39	5,000	0.50	1,100

J. V. LOWNEY ASSOC.
OCT 26 1990
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TTL results are reported as mg/kg of wet weight.
Analytes reported as N.D. were not present above the stated limit of detection.

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Project Manager



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J.V. Lowney & Associates	Client Project ID: #718-9A, 2 Hayward Parcels	Sampled: Oct 3, 1990
145 Addison Avenue	Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11	Received: Oct 3, 1990
Palo Alto, CA 94301		Extracted: Oct 12, 1990
Attention: Stason Foster	Lab Number: 010-0600 100603, 100606 & 10061	Reported: Oct 22, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.0050	N.D.	500	0.25	N.D.
Arsenic	5	0.0050	0.049	500	0.25	7.8
Beryllium	0.75	0.010	N.D.	75	0.50	N.D.
Cadmium	1	0.010	N.D.	100	0.50	2.7
Chromium (III)	580	0.0050	0.084	2,500	0.25	110
Copper	25	0.010	0.55	2,500	0.50	43
Lead	5	0.0050	0.39	1,000	0.25	46
Mercury	0.2	0.00020	N.D.	20	0.010	0.062
Nickel	20	0.050	0.39	2,000	2.5	73
Selenium	1	0.0050	N.D.	100	0.25	N.D.
Silver	5	0.010	N.D.	500	0.50	N.D.
Thallium	7	0.0050	N.D.	700	0.25	N.D.
Zinc	250	0.010	4.2	5,000	0.50	170

TTL results are reported as mg/kg of wet weight.
Analytes reported as N.D. were not present above the stated limit of detection.

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5 Analysis Method: EPA 8080 Lab Number: 010-0585 100588, 100591 & 10059	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 12, 1990 Analyzed: Oct 15, 1990 Reported: Oct 22, 1990
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ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Aldrin.....	5.0	N.D.
alpha-BHC.....	5.0	N.D.
beta-BHC.....	5.0	N.D.
delta-BHC.....	10	N.D.
gamma-BHC (Lindane).....	5.0	N.D.
Chlordane.....	50	N.D.
4,4'-DDD.....	10	N.D.
4,4'-DDE.....	5.0	N.D.
4,4'-DDT.....	10	N.D.
Dieldrin.....	5.0	N.D.
Endosulfan I.....	10	N.D.
Endosulfan II.....	5.0	N.D.
Endosulfan sulfate.....	50	N.D.
Endrin.....	10	N.D.
Endrin aldehyde.....	15	N.D.
Heptachlor.....	5.0	N.D.
Heptachlor epoxide.....	5.0	N.D.
Methoxychlor.....	5.0	N.D.
Toxaphene.....	100	N.D.
PCB-1016.....	50	N.D.
PCB-1221.....	50	N.D.
PCB-1232.....	50	N.D.
PCB-1242.....	50	N.D.
PCB-1248.....	50	N.D.
PCB-1254.....	50	N.D.
PCB-1260.....	50	N.D.

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

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Project Manager

J.V. LOWNEY ASSOC.
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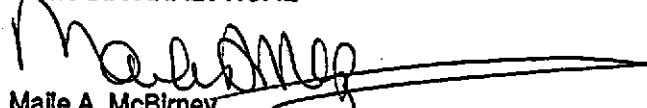
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8080 Lab Number: 010-0600 100603, 100606 & 10061.	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 12, 1990 Analyzed: Oct 15, 1990 Reported: Oct 22, 1990
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ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Aldrin.....	5.0	N.D.
alpha-BHC.....	5.0	N.D.
beta-BHC.....	5.0	N.D.
delta-BHC.....	10	N.D.
gamma-BHC (Lindane).....	5.0	N.D.
Chlordane.....	50	N.D.
4,4'-DDD.....	10	N.D.
4,4'-DDE.....	5.0	N.D.
4,4'-DDT.....	10	N.D.
Dieldrin.....	5.0	N.D.
Endosulfan I.....	10	N.D.
Endosulfan II.....	5.0	N.D.
Endosulfan sulfate.....	50	N.D.
Endrin.....	10	N.D.
Endrin aldehyde.....	15	N.D.
Heptachlor.....	5.0	N.D.
Heptachlor epoxide.....	5.0	N.D.
Methoxychlor.....	5.0	N.D.
Toxaphene.....	100	N.D.
PCB-1016.....	50	N.D.
PCB-1221.....	50	N.D.
PCB-1232.....	50	N.D.
PCB-1242.....	50	N.D.
PCB-1248.....	50	N.D.
PCB-1254.....	50	N.D.
PCB-1260.....	50	N.D.

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

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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5
Analysis Method: EPA 8080
Lab Number: 010-0585 100588, 100591 & 10059

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 12, 1990
Analyzed: Oct 15, 1990
Reported: Oct 22, 1990

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
PCB 1016.....	250	N.D.
PCB 1221.....	250	N.D.
PCB 1232.....	250	N.D.
PCB 1242.....	250	N.D.
PCB 1248.....	250	N.D.
PCB 1254.....	250	N.D.
PCB 1260.....	250	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8080 Lab Number: 010-0600 100603, 100606 & 10061	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 12, 1990 Analyzed: Oct 15, 1990 Reported: Oct 22, 1990
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POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
PCB 1016.....	50	N.D.
PCB 1221.....	50	N.D.
PCB 1232.....	50	N.D.
PCB 1242.....	50	N.D.
PCB 1248.....	50	N.D.
PCB 1254.....	50	N.D.
PCB 1260.....	50	N.D.

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

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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Sample Descript: Soil
Analysis for: Cyanide
First Sample #: 010-0585

Sampled: Oct 3, 1990
Received: Oct 3, 1990

Reported: Oct 22, 1990

LABORATORY ANALYSIS FOR: Cyanide

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
010-0585 010-0588 010-0591 010-0597	Soil Composite of SS-1,SS-2,SS-3,SS-5	0.50	N.D.
010-0600 010-0603 010-0606 010-0615	Soil Comp. of SS-6, SS-7,SS-8,SS-11	0.50	N.D.

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

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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Analysis Method: Polarized Light Microscopy First Sample #: 010-0585	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Reported: Oct 22, 1990
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ASBESTOS ANALYSIS

Sample Number	Sample Description	Detection Limit fibers/g	Sample Result fibers/g	Asbestos Type (if present)
010-0585 010-0588 010-0591 010-0597	Soil Composite of SS-1,SS-2,SS-3,SS-5	1.0	N.D.	-
010-0600 010-0603 010-0606 010-0615	Soil Comp. of SS-6, SS-7,SS-8,SS-11	1	N.D.	-

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

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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 010-0585	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Analyzed: Oct 11, 1990 Reported: Oct 22, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
010-0585 010-0588 010-0591 010-0597	Soil Composite of SS-1,SS-2,SS-3,SS-5	N.D.	N.D.	N.D.	N.D.	N.D.
010-0600 010-0603 010-0606 010-0615	Soil Comp. of SS-6, SS-7,SS-8,SS-11	N.D.	N.D.	N.D.	N.D.	N.D.

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard. Analytes reported as N.D. were not present above the stated limit of detection.

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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Matrix Descript: Soil Analysis Method: EPA 3550/8015 First Sample #: 010-0585	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 12, 1990 Analyzed: Oct 12, 1990 Reported: Oct 22, 1990
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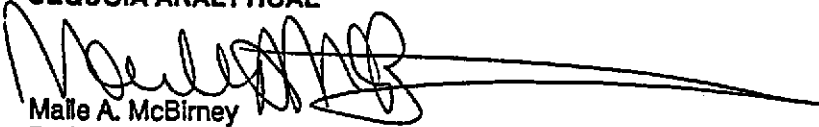
TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
010-0585 010-0588 010-0591 010-0597	Soil Composite of SS-1,SS-2,SS-3,SS-5	N.D.
010-0600 010-0603 010-0606 010-0615	Soil Comp. of SS-6, SS-7,SS-8,SS-11	N.D.

Detection Limits: 1.0

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Method: EPA 8270
Analyst(s): T. Fowler
QC Sample #: SBLK101090

Q.C. Sample Dates
Extracted: Oct 10, 1990
Analyzed: Oct 11, 1990
Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

Analyte	Sample Conc.	Spike Conc. Added	Conc. Matrix Spike	Matrix Spike % Recovery	Conc. Matrix Spike Duplicate	Matrix Spike Duplicate % Recovery	Relative % Difference
Phenol	N.D.	100	41	41	39	39	5.0
2-Chlorophenol	N.D.	100	82	82	76	76	7.6
1,4-Dichloro-benzene	N.D.	50	37	74	40	80	7.8
N-Nitroso-Di-N-propylamine	N.D.	50	38	76	40	80	5.1
1,2,4-Trichloro-benzene	N.D.	50	39	78	42	84	7.4
4-Chloro-3-Methylphenol	N.D.	100	93	93	86	86	7.8
Acenaphthene	N.D.	50	41	82	42	84	2.4
4-Nitrophenol	N.D.	100	49	49	49	49	0
2,4-Dinitro-toluene	N.D.	50	48	96	47	94	2.1
Pentachloro-phenol	N.D.	100	83	83	82	82	1.2
Pyrene	N.D.	50	50	100	50	100	0

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Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	High B.P. Hydrocarbons	Benzene	Toluene	Ethyl benzene	Xylenes	gamma-BHC	Aldrin
Method:	EPA 8015	EPA 8020/8015	8020/8015	8020/8015	8020/8015	EPA 8080	EPA 8080
Analyst:	K. Mitchell	Dinsay/Meyer	Dinsay/Meyer	Dinsay/Meyer	Dinsay/Meyer	M. Williams	M. Williams
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Oct 12, 1990	Oct 11, 1990	Oct 11, 1990	Oct 11, 1990	Oct 11, 1990	Oct 10, 1990	Oct 10, 1990
QC Sample #:	010-1157					Blank	Blank
Sample Conc.:	N.D.	0.0063	0.0065	N.D.	0.0057	N.D.	N.D.
Spike Conc. Added:	15	0.20	0.20	0.20	0.60	10	10
Conc. Matrix Spike:	14	0.22	0.19	0.21	0.63	10	9.6
Matrix Spike % Recovery:	93	110	92	110	100	100	96
Conc. Matrix Spike Dup.:	10	0.22	0.21	0.22	0.66	12	10
Matrix Spike Duplicate % Recovery:	67	110	100	110	110	120	100
Relative % Difference:	33	0	10	4.7	4.7	18	4.1

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Maile A. McBirney
Maile A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Dieldrin	Cyanide	Lead STLC	Lead TTLC	Arsenic STLC	Selenium STLC	Arsenic TTLC
Method:	EPA 8080	EPA 335.2	EPA 7421	EPA 7421	EPA 7040	EPA 7760	EPA 7040
Analyst:	M. Williams	A. Maralit	R. Sharma	R. Sharma	S. Foster	S. Foster	S. Foster
Reporting Units:	mg/kg	mg/L	mg/L	mg/kg	mg/L	mg/kg	mg/kg
Date Analyzed:	Oct 10, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990	Oct 15, 1990
QC Sample #:	Blank	D.I. Water	010-1325	010-1771	010-1137	010-1137	010-0648
Sample Conc.:	N.D.	0	N.D.	15	N.D.	N.D.	N.D.
Spike Conc. Added:	20	0.10	0.10	50	0.050	0.050	50
Conc. Matrix Spike:	20	0.089	0.10	66	0.051	0.049	35
Matrix Spike % Recovery:	100	89	100	100	100	98	70
Conc. Matrix Spike Dup.:	20	0.090	0.11	67	0.050	0.050	34
Matrix Spike Duplicate % Recovery:	100	90	110	100	100	100	68
Relative % Difference:	0	1.1	9.5	1.5	2.0	2.0	2.9

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Selenium TTLIC	Mercury STLC	Antimony STLC	Beryllium STLC	Cadmium STLC	Chromium STLC	Copper STLC
Method:	EPA 7760	EPA 245.1	EPA 7041	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	S. Foster	R. Eastman	S. Foster	B. Oliver	B. Oliver	B. Oliver	B. Oliver
Reporting Units:	mg/kg	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Oct 15, 1990	Oct 16, 1990	Oct 16, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990
QC Sample #:	010-0648	010-0889	010-1587	010-1212	010-1212	010-1212	010-1212
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	50	0.0020	0.020	1.0	1.0	1.0	1.0
Conc. Matrix Spike:	39	0.0017	0.017	0.90	0.93	0.83	0.85
Matrix Spike % Recovery:	78	82	85	90	93	83	85
Conc. Matrix Spike Dup.:	41	0.0020	0.018	1.0	1.0	0.94	1.1
Matrix Spike Duplicate % Recovery:	82	98	90	100	100	94	110
Relative % Difference:	5.0	16	5.7	11	7.3	10	26

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Nickel STLC	Silver STLC	Thallium STLC	Zinc STLC	Mercury STLC
Method:	EPA 6010	EPA 6010	EPA 7841	EPA 6010	7471/245.1
Analyst:	B. Oliver	B. Oliver	S. Foster	B. Oliver	R. Eastman
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Oct 12, 1990	Oct 12, 1990	Oct 16, 1990	Oct 12, 1990	Oct 15, 1990
QC Sample #:	010-1212	010-1212	010-1587	010-1212	100600,3,6,15
Sample Conc.:	N.D.	N.D.	N.D.	0.11	0.062
Spike Conc. Added:	1.0	1.0	0.020	1.0	0.10
Conc. Matrix Spike:	0.90	0.73	0.024	0.91	0.15
Matrix Spike % Recovery:	90	73	120	80	88
Conc. Matrix Spike Dup.:	0.95	0.98	0.024	1.1	0.16
Matrix Spike Duplicate % Recovery:	95	98	120	100	100
Relative % Difference:	5.4	29	0	19	8.3

SEQUOIA ANALYTICAL

Maile A. McBirney
Maile A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

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(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Antimony TTLIC	Beryllium TTLIC	Cadmium TTLIC	Chromium TTLIC	Copper TTLIC	Nickel TTLIC	Silver TTLIC
Method:	EPA 7041	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	S. Foster	R. Sharma	R. Sharma	R. Sharma	R. Sharma	R. Sharma	R. Sharma
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Oct 16, 1990	Oct 15, 1990	Oct 15, 1990	Oct 15, 1990	Oct 15, 1990	Oct 15, 1990	Oct 15, 1990
QC Sample #:	010-1587	010-1771	010-1771	010-1771	010-1771	010-1771	010-1771
Sample Conc.:	N.D.	N.D.	N.D.	24	28	N.D.	N.D.
Spike Conc. Added:	1.0	500	500	500	500	500	500
Conc. Matrix Spike:	0.66	510	480	500	440	510	370
Matrix Spike % Recovery:	66	100	96	95	83	100	74
Conc. Matrix Spike Dup.:	0.64	510	460	500	450	500	360
Matrix Spike Duplicate % Recovery:	64	100	92	95	84	100	72
Relative % Difference:	3.1	0	45	0	2.2	2.0	2.7

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Thallium TTLc	Zinc TTLc
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Method:	EPA 7841	EPA 6010
Analyst:	S. Foster	R. Sharma
Reporting Units:	mg/kg	mg/kg
Date Analyzed:	Oct 16, 1990	Oct 15, 1990
QC Sample #:	010-1587	010-1771

Sample Conc.: N.D. 40

Spike Conc. Added: 1.0 500

Conc. Matrix Spike: 0.99 450

Matrix Spike % Recovery: 99 82

Conc. Matrix Spike Dup.: 0.97 440

Matrix Spike Duplicate % Recovery: 97 80

Relative % Difference: 2.0 2.2

SEQUOIA ANALYTICAL

Maile A. McBirney
Maile A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Method (units): EPA 8240 (µg/L purged)
Analyst(s): E. Manuel
QC Sample #: 009-3678

Q.C. Sample Dates

Analyzed: Oct 15, 1990
Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

Analyte	Sample Conc.	Spike Conc. Added	Conc. Matrix Spike	Matrix Spike % Recovery	Conc. Matrix Spike Duplicate	Matrix Spike % Recovery	Relative % Difference
1,1-Dichloroethene	N.D.	50	56	110	54	110	3.6
Trichloroethene	N.D.	50	47	94	46	92	2.2
Benzene	N.D.	50	53	110	52	100	1.9
Toluene	N.D.	50	48	96	48	96	0
Chlorobenzene	N.D.	50	51	100	51	100	0

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2-Hayward Parcels Matrix Descript: Water Analysis Method: EPA 3510/8015 First Sample #: 010-0873 C	Sampled: Oct 4, 1990 Received: Oct 4, 1990 Extracted: Oct 8, 1990 Analyzed: Oct 10, 1990 Reported: Oct 22, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons $\mu\text{g/L}$ (ppb)
010-0873	AF-3	N.D.
010-0874	AF-1	N.D.
010-0875	AF-2	N.D.
010-0876	AF-4	N.D.
010-0877	AF-5	62

Detection Limits:

50

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2-Hayward Parcels
Matrix Descript: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 010-0873 A-B

Sampled: 10/3 & 10/4/90
Received: Oct 4, 1990
Analyzed: Oct 9, 1990
Reported: Oct 22, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons	Benzene	Toluene	Ethyl Benzene	Xylenes
		$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)
010-0873	AF-3	N.D.	N.D.	N.D.	N.D.	N.D.
010-0874	AF-1	N.D.	N.D.	N.D.	N.D.	N.D.
010-0875	AF-2	N.D.	N.D.	N.D.	N.D.	N.D.
010-0876	AF-4	N.D.	N.D.	N.D.	N.D.	N.D.
010-0877	AF-5	N.D.	N.D.	N.D.	N.D.	N.D.
010-0878	HP-13	N.D.	N.D.	N.D.	N.D.	N.D.

J. V. LOWNEY ASSOC.

OCT 24 1990

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Detection Limits:

30

0.30

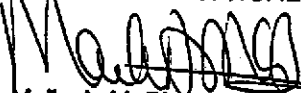
0.30

0.30

0.30

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

110



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2-Hayward Parcels Matrix Descript: Water Analysis Method: EPA 3510/8015 First Sample #: 010-0873	Sampled: 10/3 & 10/4/90 Received: Oct 4, 1990 Extracted: Oct 8, 1990 Analyzed: Oct 10, 1990 Reported: Oct 22, 1990
---------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	Motor Oil $\mu\text{g/L}$ (ppb)
010-0873	AF-3	N.D.
010-0874	HP-13	N.D.

Detection Limits:

50

High Boiling Point Hydrocarbons are quantitated against a motor oil fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2-Hayward Parcels
Matrix Descript: Water
Analysis Method: SM 503 A&E (Gravimetric)
First Sample #: 010-0873 D

Sampled: 10/3 & 10/4/90
Received: Oct 4, 1990
Extracted: Oct 8, 1990
Analyzed: Oct 9, 1990
Reported: Oct 22, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
010-0873	AF-3	N.D.
010-0878	HP-13	N.D.

Detection Limits:

5.0

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2-Hayward Parcels

QC Sample Group: 100873-78

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl benzene	Xylenes	High B.P. Hydrocarbons	Oil & Grease
	Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Analyst:	E. Gloria/W. Parks	E. Gloria/W. Parks	Gloria/Parks	Gloria/Parks	M. Ramos	Laikhtman/Gill
Reporting Units:	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
Date Analyzed:	Oct 9, 1990	Oct 9, 1990	Oct 9, 1990	Oct 9, 1990	Oct 10, 1990	Oct 9, 1990
QC Sample #:	009-3795	009-3795	009-3795	009-3795	D.L.	BLK10/8/90
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30	300	100
Conc. Matrix Spike:	11	10	10	32	340	110
Matrix Spike % Recovery:	110	100	100	110	110	110
Conc. Matrix Spike Dup.:	10	9.2	8.9	29	260	110
Matrix Spike Duplicate % Recovery:	100	92	89	97	87	110
Relative % Difference:	9.5	8.3	12	9.8	25	0

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Langtry

Client Project ID: Hayward Parcels, Hayward
Sample Descript: Soil
Analysis for: Lead, TTLC & STLC
First Sample #: R0100585

Sampled: Oct 31, 1990
Received: Oct 31, 1990
Relogged: Jan 2, 1990
Analyzed: Nov 6, 1990
Reported: Nov 7, 1990


LABORATORY ANALYSIS FOR: Lead, TTLC & STLC

Sample Number	Sample Description	TTLC Detection Limit mg/kg	TTLC Sample Result mg/kg	STLC Detection Limit mg/L	STLC Sample Result mg/L
010-0585	SS-1	0.25	140	0.0050	3.6
010-0588	SS-2	0.25	42	0.0050	0.72
010-0591	SS-3	0.25	270	0.0050	9.9
010-0597	SS-5	0.25	24	0.0050	0.32
010-0608	SS-9	0.25	180	0.0050	1.7
010-0614	SS-11	0.25	7.9	0.0050	0.24
010-0617	SS-12	0.25	390	0.0050	0.70
010-0626	SS-15	0.25	27	0.0050	0.34

J. V. LOWNEY ASSOC.
NOV 8 1990
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Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Langtry

Client Project ID: Hayward Parcels, Hayward

QC Sample Group: 0100585 - 0100626

Reported: Nov 7, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Lead TTLC	Lead STLC
---------	--------------	--------------

Method:	EPA 7421	EPA 6010
Analyst:	R.Eastman	B.Oliver
Reporting Units:	mg/L	mg/L
Date Analyzed:	Nov 5, 1990	Nov 6, 1990
QC Sample #:	010-0626	011-0140

Sample Conc.: 27 N.D.

Spike Conc. Added: 50 10

Conc. Matrix Spike: 74 9.7

Matrix Spike % Recovery: 94 97

Conc. Matrix Spike Dup.: 77 9.0

Matrix Spike Duplicate % Recovery: 100 90

Relative % Difference: 4.0 7.5

SEQUOIA ANALYTICAL

M. A. McBirney
M. A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

ANAMETRIX INC

Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

**REPORT**

Peter Leffler
J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301

July 24, 1990
Anamatrix W.O.#: 9007078
Date Received : 07/12/90
Project No. : 718-9

Dear Mr. Leffler:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS.

NOTE: 1) Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,
ANAMETRIX, INC.

Arun Patel

Arun Patel
Prep Lab Supervisor

AP/kd

J. V. LOWNEY & ASSOCIATES

JUL 26 1990

F.

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : J.V. Lowney & Associates
Address : 145 Addison Avenue
City : Palo Alto, CA 94301
Attn. : Peter Leffler

Anamatrix W.O.#: 9007078
Date Received : 07/12/90
Purchase Order#: N/A
Project No. : 718-9
Date Released : 07/24/90

Anamatrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
----------------	-------------	--------	--------------	--------	--------------	---------------	-----------

RESULTS


9007078-01	AF-3 GROUNDWATER	WATER	07/11/90	503E	07/13/90	07/13/90	N/A
9007078-02	EB-3, SOIL, OS-1	SOIL	07/11/90	503E	07/13/90	07/13/90	N/A
9007078-01	AF-3 GROUNDWATER	WATER	07/11/90	503D	07/13/90	07/13/90	N/A
9007078-02	EB-3, SOIL, OS-1	SOIL	07/11/90	503D	07/13/90	07/13/90	N/A

Note: Soil sample EB-3 was mislabeled. It should be EB-2.

PMLe 7/31/90

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE - 503E
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9
 Matrix : WATER
 Date sampled : 07/11/90
 Date ext. TOG: 07/13/90
 Date anl. TOG: 07/13/90

Anamatrix I.D. : 9007078
 Analyst : KK
 Supervisor : 
 Date released : 07/24/90

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9007078-01	AF-3 GROUNDWATER	5	ND

ND - Not detected at or above the practical quantitation limit for the method.

TOG - Total Oil & Grease is determined by Standard Method 503E.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE - 503E
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9
 Matrix : SOIL
 Date sampled : 07/11/90
 Date ext. TOG: 07/13/90
 Date anl. TOG: 07/13/90

Anamatrix I.D. : 9007078
 Analyst : KK
 Supervisor : GP
 Date released : 07/24/90

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9007078-02	EB-3,SOIL,OS-1	30	660

ND - Not detected at or above the practical quantitation limit for the method.

TOG - Total Oil & Grease is determined by Standard Method 503E.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE - 503D
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9
 Matrix : WATER
 Date sampled : 07/11/90
 Date ext. TOG: 07/13/90
 Date anl. TOG: 07/13/90

Anamatrix I.D. : 9007078
 Analyst : KK
 Supervisor : MP
 Date released : 07/24/90

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9007078-01	AF-3 GROUNDWATER	5	ND


ND - Not detected at or above the practical quantitation limit for the method.

TOG - Total Oil & Grease is determined by Standard Method 503D.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE - 503D
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9
 Matrix : SOIL
 Date sampled : 07/11/90
 Date ext. TOG: 07/13/90
 Date anl. TOG: 07/13/90

Anamatrix I.D. : 9007078
 Analyst : KK
 Supervisor : 
 Date released : 07/24/90

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9007078-02	EB-3, SOIL, OS-1	30	1200

ND - Not detected at or above the practical quantitation limit for the method.
 TOG - Total Oil & Grease is determined by Standard Method 503D.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANAMETRIX INC

Environmental & Analytical Chemistry
 961 Concourse Drive, Suite E, San Jose, CA 95131
 (408) 432-8192 • Fax (408) 432-8198

**REPORT**

PETER LEFFLER
 J.V. LOWNEY & ASSOCIATES
 145 ADDISON AVENUE
 PALO ALTO, CA 94301

Workorder # : 9009072
 Date Received : 09/10/90
 Project ID : P3723
 Purchase Order: N/A

The following samples were received at Anamatrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9009072- 1	AF-3

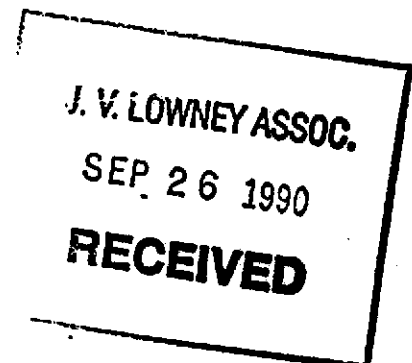
This report is paginated for your convenience and ease of review. It contains 4 pages excluding the cover letter. The report is organized into sections. Each section contains all analytical results and quality assurance data related to a specific group or section within Anamatrix. The Report Summary that precedes each section will help you determine which group at Anamatrix generated the data. The Report Summary will contain the signatures of the department supervisor and a chemist, both of whom reviewed the analytical data. Please refer all questions to the department supervisor that signed the form.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anamatrix.

Burt Sutherland

Burt Sutherland
 Laboratory Director

09-25-90
 Date



REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

PETER LEFFLER
J.V. LOWNY & ASSOCIATES
145 ADDISON AVENUE
PALO ALTO, CA 94301

Workorder # : 9009072
Date Received : 09/10/90
Project ID : P3723
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- Sample was received cold and in good condition.

Peter Leffler Sept. 25th 1990.
Department Supervisor Date

Maria E. Sumero 9-25-90
Chemist Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

PETER LEFFLER
J.V.LOWNEY & ASSOCIATES
145 ADDISON AVENUE
PALO ALTO, CA 94301


Workorder # : 9009072
Date Received : 09/10/90
Project ID : P3723
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9009072- 1	AF-3	H2O	09/07/90	503A
9009072- 1	AF-3	H2O	09/07/90	503E

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project # : P3723
Matrix : WATER
Date sampled : 09/07/90
Date ext. TOG: 09/13/90
Date anl. TOG: 09/13/90

Anamatrix I.D. : 9009072
Analyst : MG
Supervisor : 
Date released : 09/25/90

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9009072-01	AF-3	5	ND

ND - Not detected at or above the practical quantitation limit for the method.

TOG - Total Oil & Grease is determined by Standard Method 503A.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project # : P3723
Matrix : WATER
Date sampled : 09/07/90
Date ext. TOG: 09/13/90
Date anl. TOG: 09/13/90

Anamatrix I.D. : 9009072-01
Analyst : ~~ME~~
Supervisor : ~~GP~~
Date released : 09/25/90

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9009072-01	AF-3	5	ND

ND - Not detected at or above the practical quantitation limit for the method.

TOG - Total Oil & Grease is determined by Standard Method 503E.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANAMETRIX INC

Environmental & Analytical Chemistry
51 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

**REPORT**

MR. STASON FOSTER
J.V. LOWNY & ASSOCIATES
145 ADDISON AVENUE
PALO ALTO, CA 94301


Workorder # : 9010077
Date Received : 10/05/90
Project ID : 718-9A
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9010077- 1	SS-5

This report is paginated for your convenience and ease of review. It contains 2 pages excluding the cover letter. The report is organized into sections. Each section contains all analytical results and quality assurance data related to a specific group or section within Anametrix. The Report Summary that precedes each section will help you determine which group at Anametrix generated the data. The Report Summary will contain the signatures of the department supervisor and a chemist, both of whom reviewed the analytical data. Please refer all questions to the department supervisor that signed the form.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.



Burt Sutherland
Laboratory Director

10-25-90

Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. STASON FOSTER
J.V.LOWNEY & ASSOCIATES
145 ADDISON AVENUE
PALO ALTO, CA 94301

Workorder # : 9010077
Date Received : 10/05/90
Project ID : 718-9A
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9010077- 1	SS-5	SOIL	10/03/90	5520EF

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. STASON FOSTER
J.V. LONEY & ASSOCIATES
145 ADDISON AVENUE
PALO ALTO, CA 94301

Workorder # : 9010077
Date Received : 10/05/90
Project ID : 718-9A
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for this samples.

Ernest Peter
Department Supervisor
Oct, 24th 1990.
Date

Kamel G. Kar
Chemist
10/25/90
Date

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9A
 Matrix : SOIL
 Date sampled : 10/03/90
 Date ext. TOG: 10/20/90
 Date anl. TOG: 10/20/90

Anamatrix I.D. : 9010077
 Analyst : k
 Supervisor : (AP)
 Date released : 10/24/90

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9010077-01	SS-5	30	40
GSBL102090	METHOD BLANK	30	ND

ND - Not detected at or above the practical quantitation limit for the method.
 TOG - Total Oil & Grease is determined by Standard Method 5520E&F.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

October 30, 1990

Peter Leffler, Project Leader
J. V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301

Dear Mr. Leffler:

Enclosed are the results of the analyses of the samples
submitted on October 12, 1990 from Project Soil Analysis.

We appreciate this opportunity to be of service to you on
this project. If you have any questions regarding this
material, or if you just want to discuss any aspect of your
projects, please do not hesitate to contact me.

Sincerely,

James E. Bruya, for

James E. Bruya, Ph.D.

JEB/fae

Enclosures

J. V. LOWNEY ASSOC.

NOV 5 1990

RECEIVED

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: October 30, 1990
Date Submitted: October 12, 1990
Project: Soil Analysis

RESULTS OF ANALYSES OF THE SOIL SAMPLES
FOR CONTAMINANT CHARACTERIZATION
BY THIN LAYER CHROMATOGRAPHY

Sample #

TLC Characterization

SS-1

The TLC chromatogram showed a pattern similar to that of used engine oil. This characterization is based on the presence of a band having an Rf (hexane) of 0.9, visible under staining with iodine and a second band having an Rf (methylene chloride) of 1.0, visible under UV light. There was also several bands showing an Rf (methylene chloride) of <1 which is indicative of oxygenated organic compounds.

SS-2

The TLC chromatogram showed a pattern similar to that of an asphaltic material. This characterization is based on the presence of a band having an Rf (hexane) of ca 0.5 to 0.0, visible under staining with iodine and visible under both short and long wave UV light.

SS-8

The TLC chromatogram showed a pattern similar to that of used engine oil. This characterization is based on the presence of a band having an Rf (hexane) of 0.9, visible under staining with iodine and a second band having an Rf (methylene chloride) of 1.0, visible under UV light. There was also several bands showing an Rf (methylene chloride) of <1 which is indicative of oxygenated organic compounds. This material appeared to be similar to that seen in sample SS-1 above.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: October 30, 1990

Date Submitted: October 12, 1990

Project: Soil Analysis

RESULTS OF ANALYSES OF THE SOIL SAMPLES
FOR CONTAMINANT CHARACTERIZATION
BY THIN LAYER CHROMATOGRAPHY

Sample #

TLC Characterization

SS-10

The TLC chromatogram showed a pattern similar to that of an asphaltic material. This characterization is based on the presence of a band having an Rf (hexane) of ca 0.5 to 0.0, visible under staining with iodine and visible under both short and long wave UV light. This material appeared to be similar to that seen in sample SS-2 above.

SS-13

The TLC chromatogram showed a pattern similar to that of an asphaltic material. This characterization is based on the presence of a band having an Rf (hexane) of ca 0.5 to 0.0, visible under staining with iodine and visible under both short and long wave UV light. This material appeared to be similar to that seen in sample SS-2 and SS-10 above.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: October 30, 1990

Date Submitted: October 12, 1990

Project: Soil Analysis

RESULTS OF ANALYSES OF THE SOIL SAMPLES
FOR FINGERPRINT CHARACTERIZATION
BY CAPILLARY GAS CHROMATOGRAPHY

Sample #

GC Characterization

SS-1

The gas chromatographic trace did not show the presence of significant levels of volatile or semi-volatile contamination. Very low levels of some compounds were seen, however, the level found was comparable to that found in blank samples.

SS-8

The gas chromatographic trace was indicative of a high boiling petroleum product, such as motor oil. This characterization is based on the presence of a relatively smooth envelope of peaks present from ca n -C₁₇ to n -C₃₄ with a maximum at n -C₂₇.

SS-13

The gas chromatographic trace did not show the presence of significant levels of volatile or semi-volatile contamination.

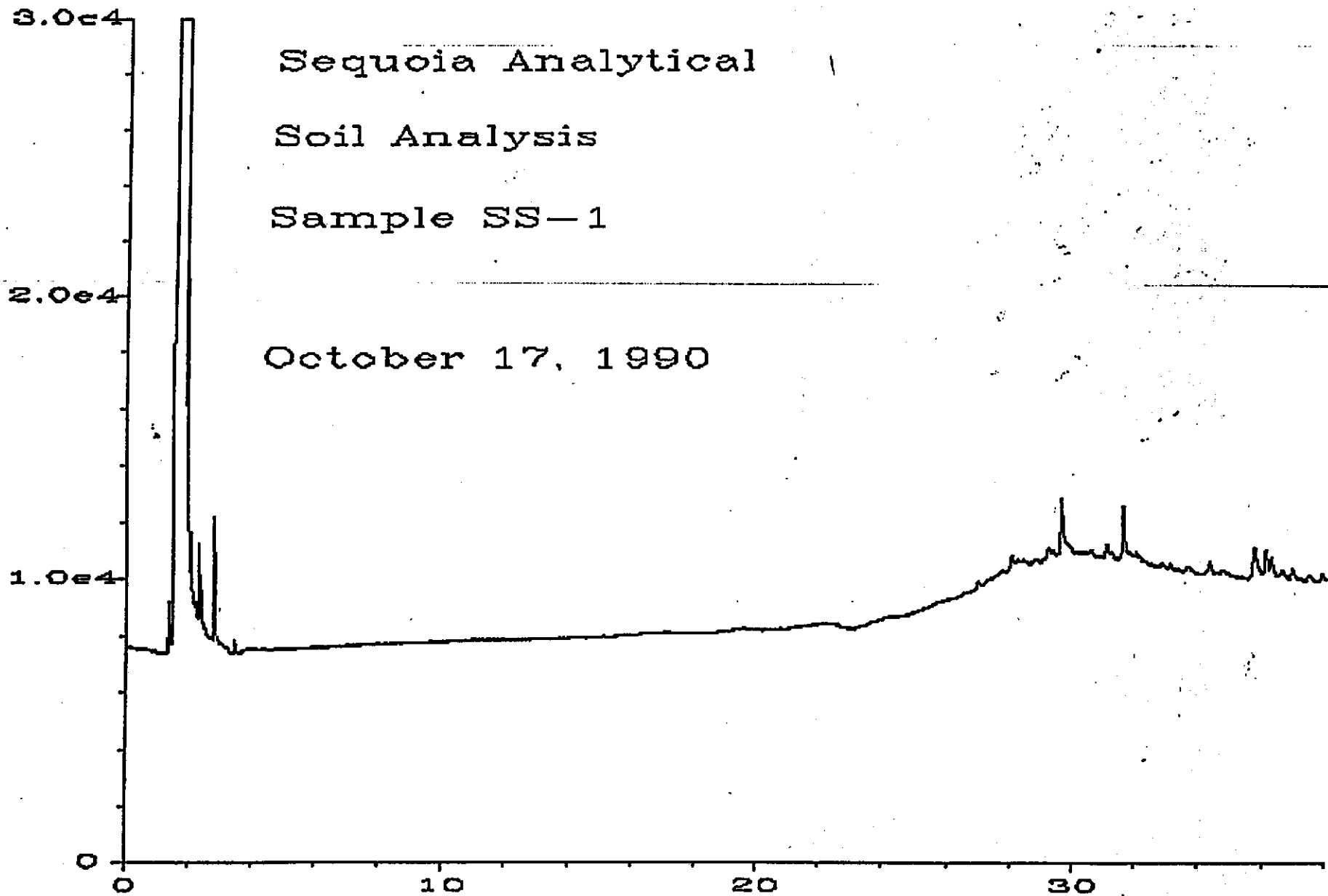


Fig. 1 in A:\008F0401.D

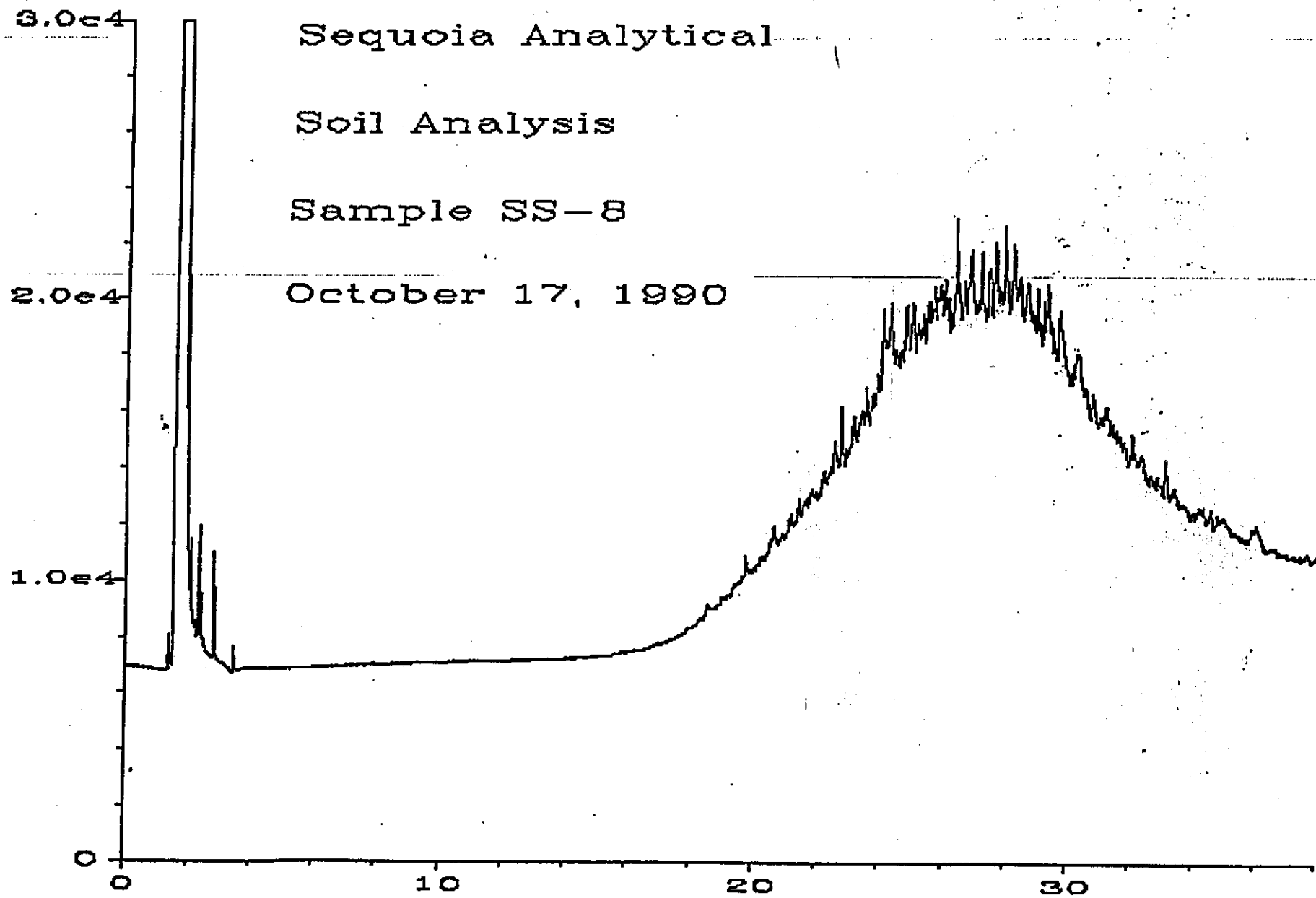


Fig. 1 in A:\010F0401.D

3.0e4

Sequicia Analytical

Soil Analysis

Sample SS-13

October 17, 1990

2.0e4

1.0e4

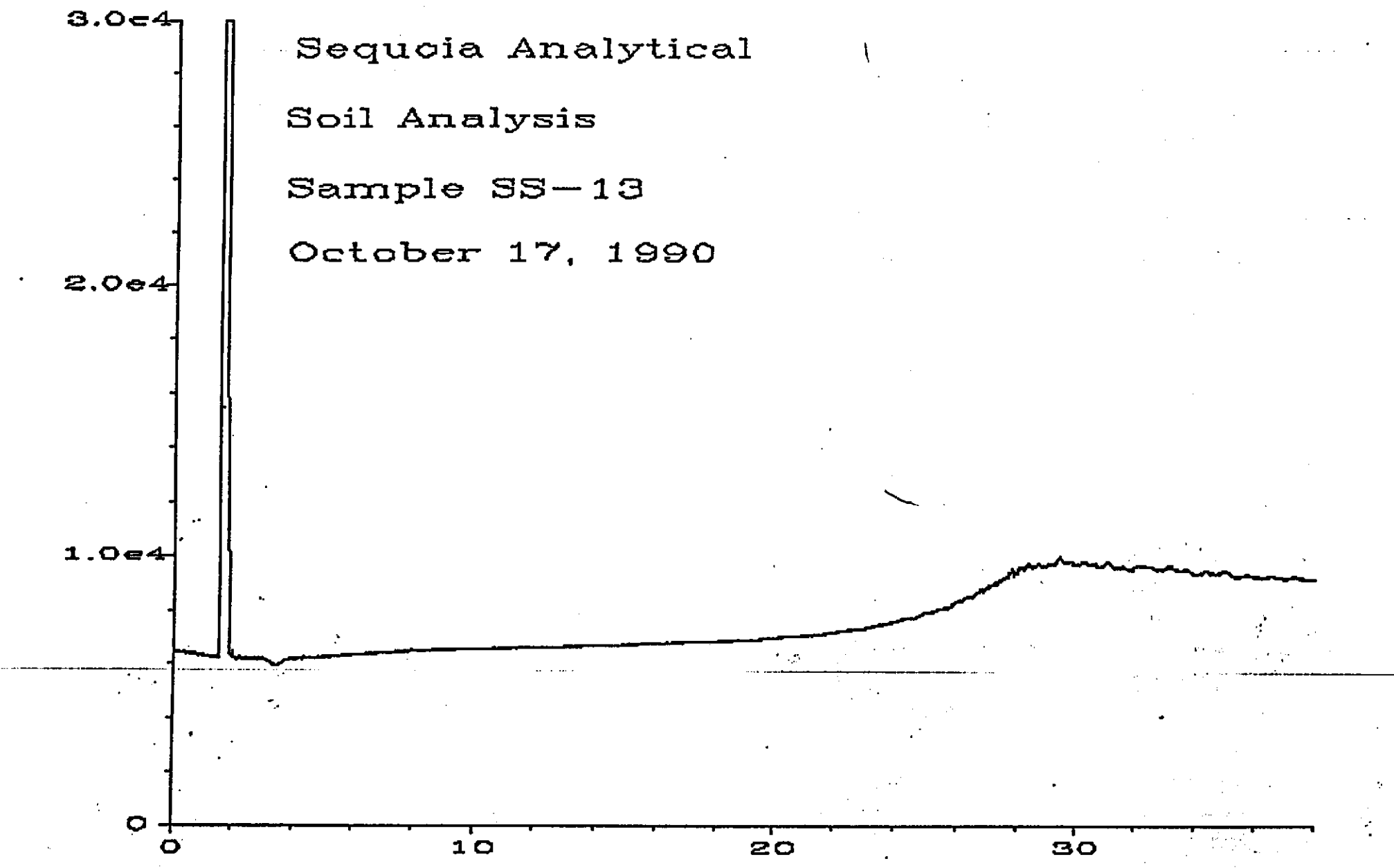
0

10

20

30

Fig. 1 in A:\011F0401.D





SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P4025 Sample Descript: Soil Analysis for: pH First Sample #: 105-0111	Sampled: May 1, 1991 Received: May 1, 1991 Analyzed: May 2, 1991 Reported: May 16, 1991
---------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------

LABORATORY ANALYSIS FOR: pH

Sample Number	Sample Description	Detection Limit	Sample Result
105-0111	HS-4, O5-1	N.A.	8.8
105-0112	HS-5, O5-1	N.A.	8.4
105-0113	HS-9, O5-1	N.A.	12
105-0114	HS-10, O5-1	N.A.	9.6
105-0115	HS-11, O5-1	N.A.	10
105-0116	HS-12, O5-1	N.A.	8.6

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

SEQUOIA ANALYTICAL

Malle McBirney Springer
Malle McBirney Springer
Project Manager

1050111.JVL <1>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P4025 Sample Descript: Water Analysis for: pH First Sample #: 105-0117	Sampled: May 1, 1991 Received: May 1, 1991 Analyzed: May 2, 1991 Reported: May 16, 1991
---------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------

LABORATORY ANALYSIS FOR: pH

Sample Number	Sample Description	Detection Limit	Sample Result
105-0117	HP-1	N.A.	8.9
105-0118	HP-2	N.A.	9.5
105-0119	HP-3	N.A.	8.7

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

SEQUOIA ANALYTICAL

Maria M. Springer
Maria M. Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94083
 (415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P4025 Matrix Descript: Soil Analysis Method: SM 5520 E&F (Gravimetric) First Sample #: 105-0111	Sampled: May 1, 1991 Received: May 1, 1991 Extracted: May 2, 1991 Analyzed: May 2, 1991 Reported: May 3, 1991
---------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
105-0111	HS-4, O5-1	130
105-0112	HS-5, O5-1	780
105-0113	HS-9, O5-1	370
105-0114	HS-10, O5-1	41
105-0115	HS-11, O5-1	N.D.
105-0116	HS-12, O5-1	260

Detection Limits:

30

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

SEQUOIA ANALYTICAL

Maile McBirney Springer
 Maile McBirney Springer
 Project Manager



SEQUOIA ANALYTICAL

880 Chesapeake Drive • Redwood City, CA 94063
(415) 384-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: Relog
Matrix Descript: Soil
Analysis Method: SM 5520 B&F (Gravimetric)
First Sample #: 105-0111

Sampled: May 1, 1991
Received: May 1, 1991
Extracted: May 7, 1991
Analyzed: May 7, 1991
Reported: May 16, 1991

STLC WITH DI EXTRACT FOR: TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
105-0111	HS-4	N.D.
105-0112	HS-5	N.D.
105-0113	HS-9	N.D.
105-0114	HS-10	N.D.
105-0115	HS-11	(N.D. on original extract)
105-0116	HS-12	N.D.

Detection Limits:

5.0

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

SEQUOIA ANALYTICAL

Mark Springer
Mark McBirney Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P4025 Sample Descript: Soil, HS-1, O5-1 Lab Number: 105-0108	Sampled: May 1, 1991 Received: May 1, 1991 Extracted: May 13, 1991 Reported: May 16, 1991
---------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	Soluble Threshold Limit Concentration Waste Extraction Test			Total Threshold Limit Concentration		
	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.0050	-	500	0.25	-
Arsenic	5.0	0.0050	-	500	0.25	-
Barium	100	0.10	-	10,000	5.0	-
Beryllium	0.75	0.010	-	75	0.50	-
Cadmium	1.0	0.010	-	100	0.50	-
Chromium (VI)	5	0.0050	-	500	0.050	-
Chromium (III)	560	0.0050	-	2,500	0.25	-
Cobalt	80	0.050	-	8,000	2.5	-
Copper	25	0.010	-	2,500	0.50	-
Lead	5.0	0.0050	4.6	1,000	0.25	1,700
Mercury	0.2	0.00020	-	20	0.010	-
Molybdenum	350	0.050	-	3,500	2.5	-
Nickel	20	0.050	-	2,000	2.5	-
Selenium	1.0	0.0050	-	100	0.25	-
Silver	5	0.010	-	500	0.50	-
Thallium	7.0	0.0050	-	700	0.25	-
Vanadium	24	0.050	-	2,400	2.5	-
Zinc	250	0.010	-	5,000	0.50	-
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTL results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maureen Springer
Maureen Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Laffler

Client Project ID: P4025

QC Sample Group: 1050117-9

Reported: May 16, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	pH	Lead	STLC- Lead
Method:	EPA 9045	EPA 7421	EPA 239.2
Analyst:	A. Pannu	V. Patel	V. Patel
Reporting Units:	N.A.	mg/kg	mg/L
Date Analyzed:	May 2, 1991	May 14, 1991	May 15, 1991
QC Sample #:	104-0145	105-0155	105-0110
Sample Conc.:	13	27	1.2
Spike Conc. Added:	N.A.	50	10
Conc. Matrix Spike:	N.A.	72	10
Matrix Spike % Recovery:	N.A.	90	88
Conc. Matrix Spike Dup.:	13	75	9.9
Matrix Spike Duplicate % Recovery:	N.A.	96	87
Relative % Difference:	0.0	4.1	1.0

SEQUOIA ANALYTICAL

Malle McBirney Springer
Malle McBirney Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

1050111.JVL <10>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94083
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P4025

QC Sample Group: 1050111-9

Reported: May 16, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Total Oil & Grease
---------	--------------------

Method: SM 5520 E & F
Analyst: L. Laichtman
Reporting Units: mg
Date Analyzed: May 2, 1991
QC Sample #: BLK 5/2/91

Sample Conc.: N.D.

Spike Conc. Added: 100

Conc. Matrix Spike: 97

Matrix Spike % Recovery: 97

Conc. Matrix Spike Dup.: 95

Matrix Spike Duplicate % Recovery: 95

Relative % Difference: 2.1

SEQUOIA ANALYTICAL

Malle McBlimey Springer
Malle McBlimey Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

1050111.JVL <11>

APPENDIX F - LIETZ LEVEL, SURVEYING

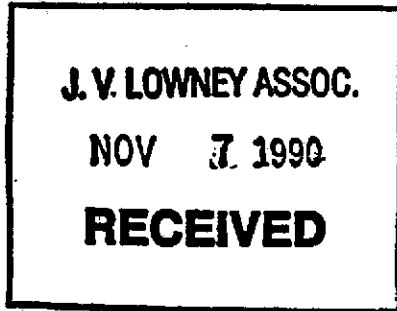
The locations of the monitoring wells were approximately determined. A two-person crew using a Lietz level and an engineers' graduated rod determined the elevations of the monitoring wells. Elevations were recorded to the nearest hundredth of a foot. The monitoring wells were surveyed to a relative elevation of 7.5 feet at the top of casing for monitoring well AF-5.



ENVIRONMENTAL QUESTIONNAIRE FOR OWNERS

Project Name: TWO HAYWARD PARCELS, INTERSECTION OF HESPERIAN BLVD. AND ALAMEDA FLOOD CONTROL CHANNEL, HAYWARD, CA

Project Numbers: 718-9A



Please return to:

J. V. LOWNEY & ASSOCIATES
145 Addison Avenue
Palo Alto, California 94301
415-328-6920

Attention: Peter M. Leffler

Please fill in and attach your business card if possible.

Name: AM HOMES INC

Address: 577 SALMAR AVE
CAMPBELL, CA 95008
ATTN: TOM QUAGLIA

Business Phone Number: 408-370-1166

Best time to contact you: M-F 8:30AM-5:30PM

The project site (32 acres) is owned by Fibare Partners, a joint venture corporation consisting of Charles Davidson, Ken EARP (OAKWOOD PROP) and AM Homes.

Please use additional sheets if space provided is not adequate.

1. Which site(s) do you own?

32 acre ~~was~~ former movie theater site

2. How long have you owned this site(s)?

1988

3. Describe present and past usage of the property to the best of your knowledge. Is there any history of past site usage involving the use, storage or disposal of hazardous materials onsite? If "YES," please describe.

Past usage is as a movie theater drive-in site. Prior to drive-in the site ~~was~~ was cultivated for various agricultural crops. Since purchase the site has sat vacant.

4. Describe present and past usage of properties adjacent to or in close proximity of your property.

southern boundary is Alameda County flood channel. Northern boundary is the Tri-paldi Industrial Park. Across Hesperian to west is ag land.

5. Do your current or past tenant(s) have a hazardous material management plan? If the answer is "NO," you can skip questions 6 and 7. If "YES," please attach a copy of it..

No current tenants. We have ~~no~~ no knowledge of such a plan for previous tenants.

6. Has your current tenant(s)' or past tenant(s)' hazardous material management plan been provided to any government agencies? If "YES," please provide name(s) and address(es).

—

7. What is the name, address and phone number of the person(s) who can provide a copy of the hazardous material management plan?

—

8. What types and quantities of chemicals are being used, or have been used on your property?

<u>Chemical Type (name)</u>	<u>Quantity</u>
None by AM Homes	Fibre Partners
since purchase in	1988

9. What types and quantities of wastes are being or have been generated on your property? Are these wastes corrosive? Must the wastes be treated or disposed of quickly? Does reactivity increase over time?

<u>Waste Type (name)</u>	<u>Waste Characteristics</u>	<u>Quantity</u>
--------------------------	------------------------------	-----------------

NA

10. How are these wastes currently managed on your property?

NA

11. How were and/or are these wastes disposed? Onsite or offsite? If onsite: exactly where; does your tenant have a permit for onsite disposal; and what type of permit? If offsite: how are they collected; transported; and how often? Please provide name and address of disposal facility, as well as name and quantity of disposed wastes.

NA

12. Does your present or past tenant(s) store any wastes generated before disposal? Please thoroughly describe any storage method practiced on your property and the likelihood of spillage or leakage. Does the particular type of storage system(s) chosen adequately protect against the particular hazard of the waste (corrosivity, reactivity, ignitability)? How often is your tenant(s)' storage system(s) checked? What is the capacity of your tenant(s)' storage system(s)?

NA

13. Have any hazardous materials been spilled on your property? If "YES," describe any spill incident(s) that occurred on or adjacent to your property. Please provide date(s) of occurrence(s), types (name), and quantities of chemical(s) spilled, whether the spill was reported to any government agency, when it was reported, and whether any remedial action was taken or was necessary.

NA

14. How are health and the environment protected while wastes are stored at your property?

NA

15. Are any of the following located within the site's boundaries? Please describe.

- a) Auto Service Center (with or without gas pump):
- b) Loading/Unloading Areas:
- c) Floor Drains:
- d) Tanks (above or below ground):
- e) Boilers:
- f) Emergency Generators:
- g) Air/Water Pollution Control Equipment:
- h) Manufacturing/Processing Equipment:
- i) Transformer/Heat Transfer Equipment:

VACANT
SITE

16. Have any ground water monitoring wells been installed on or near the site? If "YES," where, and by whom?

YES: by Harding Lawson and Associates in 1989 and J.V. Lowrey and Associates in 1990

17. Do you have any knowledge of spraying or dust control operations performed during operation of the drive-in theater? If "YES" please give details.

NO: Just hear-say.

92 FEB 11 8:36

**APPENDIX E: ANALYTICAL RESULTS,
32-ACRE HAYWARD PARCEL,
HAYWARD, CALIFORNIA**

DRAFT

LOWNEY ASSOCIATES
ENVIRONMENTAL/GEOTECHNICAL/ENGINEERING SERVICES

405 Clyde Avenue, Mountain View, California 94043
(415) 967-2365 • FAX (415) 967-2785

APPENDIX E - ANALYTICAL RESULTS

Soil and ground water samples collected were placed on ice, and transported to the analytical laboratory. Chain of custody documentation was maintained for all samples. Copies of laboratory data sheet and chain of custody forms are included as part of this appendix.

Unless otherwise noted, TPH gas and BTEX analyses were performed by EPA Test Method 5030/8015/8020; TPH diesel by EPA Test Method 3550/8015; oil and grease by Standard Methods 503DE/AE or 5520EF; volatile organic compounds by EPA Test Method 8240; semi-volatile organic compounds by EPA Test Method 8270; organochlorine pesticides and PCBs by EPA Test Method 8080; metals by atomic absorption or ICP.

J.V. LOWNEY & ASSOCIATES CHAIN OF CUSTODY RECORD

Normal TAT

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED							SHIP TO:					
SAMPLER(S): (Signature)		DATE			TIME		SAMPLE DESCRIPTION		(5000/100/5/1000)	TPH	Gas + BTEX	Tests	0:1 + Grease (20)	Other	REMARKS		
718-9		Two Hayward Parcels		1	9:30		AF-1, 0 ⁵ -1 ⁰	X	X						J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
Peter Leffler / Susan Felt		9:30			AF-1, 4 ⁵ -5 ⁰	X	X										
		12:00			AF-2, 0 ⁵ -1 ⁰	X	X										
		12:00			AF-2, 4 ⁵ -5 ⁰	X	X										
		3:00			AF-3, 0 ⁵ -1 ⁰	X	X										
		3:00			AF-3, 4 ⁰ -4 ⁵	X	X										
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)							
Peter Leffler		7/5/90	5:15														
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:									
				<i>[Signature]</i>		7/5/90	1710										

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO. 718-9		PROJECT NAME/LOCATION 2 Hayward Parcels			NO. OF CON- TAINERS	ANALYSIS REQUIRED							SHIP TO: J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920				
SAMPLER (S): (Signature) <i>Peter Leffler / Jason Foster</i>						(5030/8015/8020) TPH Gas + BTEX	(503) Total Oil + Grease + PCBs										
DATE	TIME	SAMPLE DESCRIPTION															REMARKS
7/6/90																	
AF-4	9:30	AF-4, 0 ^s -1, soil			1	X	X										3 Week TAT
	9:30	AF-4, 4 ^o -4 ^s , soil			1	X	X										
	11:30	AF-5, 0 ^s -1, soil			1	X	X										
	11:30	AF-5, 4 ^o -4 ^s , soil			1	X	X										
	1:00	EB-4, 0 ^s -1, soil			1	X	X										
	1:30	EB-5, 0 ^s -1, soil			1	X	X										
	1:30	EB-2, 0 ^s -1, soil			1	X	X										
	4:00	EB-1, 0 ^s -1, soil			1	X	X										
✓	4:30	EB-3, 0 ^s -1, soil			1	X	X										
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)							
<i>Peter Leffler</i>		7/6/90	6:10														
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:									
		7/6/90	6:10	<i>[Signature]</i>													

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO. 718-9		PROJECT NAME/LOCATION 2 Hayward Parcels			NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:		
SAMPLER (S): (Signature) <i>Peter Leffler / Jason Foster</i>						<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH Gas + BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Total Oil + Grease</div> </div>						J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
DATE	TIME	SAMPLE DESCRIPTION										REMARKS		
7/11/90	10:45	AF-5, Groundwater			3	X						3 Week TAT		
	10:45	AF-5, "			1	X								
	12:15	AF-1 "			3	X								
	12:15	AF-1 "			1	X								
	1:45	AF-3 "			3	X								
	1:45	AF-3 "			1	X								
	3:00	AF-2 "			3	X								
	3:00	AF-2 "			1	X								
	5:00	AF-4 "			3	X								
	5:00	AF-4 "			1	X								
V	2:30	AF-6			3	X								
		Travel Blank			1	X								
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)				
<i>Peter Leffler</i>		7/11/90	6:00											
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:						
		7/11	6:00	<i>[Signature]</i>										

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO. <i>718-9</i>		PROJECT NAME/LOCATION <i>2 Hayward Parcels</i>			NO. OF CON- TAINERS	ANALYSIS REQUIRED						SHIP TO: J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
SAMPLER (S): (Signature) <i>Peter Leffler / Jason Foster</i>						<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">Oil + Grease (SOP Pt 3E)</div> <div style="border: 1px solid black; width: 100%; height: 100%; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> </div>								
DATE	TIME	SAMPLE DESCRIPTION												
<i>7/11/90</i>	<i>1:45</i>	<i>AF-3, Ground water</i>			<i>1</i>	<i>X</i>							<i>Normal TAT</i>	
<i>7/11/90</i>	<i>4:00</i>	<i>EB-3, Soil, OS-1</i>			<i>1</i>	<i>X</i>								
Relinquished by: (Signature) <i>Peter Leffler</i>		Date <i>7/12/90</i>	Time <i>14:10</i>	Received By: (Signature) <i>Toshi Nemura</i>		Relinquished by: (Signature)		Date	Time	Received By: (Signature)				
Laboratory of Record: <i>Anamatrix</i>		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:						

J.V. LOWNEY & ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED							SHIP TO:	
P3723		Two HAYWARD PARCELS			8210 + OPEN SCAN	8270 + OPEN SCAN	8080	oil & GREASE (603 DIE)	13 PERM. POLL. METALS	ASBESTOS	CYANIDE	J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920	
SAMPLER(S): (Signature)				DATE	TIME	SAMPLE DESCRIPTION							REMARKS
Peter Leffler / Jason Foster													
9/7/90	11:15	AF-1	GROUND WATER	9	X	X	X	X	+	+	+	3 WK. TURNAROUND	Asbestos has HNO ₃ has
	12:00	AF-2	↓	9	X	X	X	X	+	+	+		Asbestos has HNO ₃ has
	1:00	AF-3		9	X	X	X	X	+	+	+		
	2:00	AF-4		9	X	X	X	X	+	+	+		
	3:00	AF-5		9	X	X	X	X	+	+	+		
		TRAIL BLANK		1									Please Hold
Relinquished by: (Signature)				Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)	
Peter Leffler				9/7/90	4:00	K. Walters		9/7 4:05pm					
Laboratory of Record:				Date	Time	Received for Laboratory By: (Signature)		Date		Time	Remarks:		

J.V. LOWNY & ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO.	PROJECT NAME/LOCATION			NO. OF CON- TAINERS	ANALYSIS REQUIRED							SHIP TO:	
P3723	Two Hayward				Oil + Grease (SU3) (P)								J.V. LOWNY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920
SAMPLER(S): (Signature) Peter Leffler / Jason Foster													REMARKS
DATE	TIME	SAMPLE DESCRIPTION											
9/7/90	1:05	A-F-3, Groundwater			2	X							Normal TAT
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)			
Jason Foster		9/10/90	1400										
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:					
ANALYTICAL				Nicola		09/10/90	1400						

**J.V. LOWNEY & ASSOCIATES
CHAIN OF CUSTODY RECORD**

JOB NO.		PROJECT NAME/LOCATION			NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:					
718-9A		2 HAYWARD PARCELS				<div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;"> (OIL & GREASE) 503 D & E </div>						J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920					
SAMPLER(S): (Signature)		DATE			TIME							SAMPLE DESCRIPTION			REMARKS		
Jason Foster		10/3/90	9:00	SS-1, 0"-0 ⁵ , 0 ⁵ -1 ⁰ , 1 ⁰ -1 ⁵	3	+							ANALYZE EACH SAMPLE SEPARATELY FOR A TOTAL OF 45 SAMPLES 1 WEEK TURNAROUND FOR ALL SAMPLES SAVE ALL SAMPLE THAT IS UNUSED, ADDITIONAL ANALYSIS MAY BE REQUIRED AT A LATER TIME.				
			9:45	SS-2	3	+											
			10:30	SS-3	3	+											
			11:15	SS-4	3	+											
			11:45	SS-5	3	+											
			12:15	SS-6	3	+											
			12:45	SS-7	3	+											
			1:15	SS-8	3	+											
			1:45	SS-9	3	+											
			2:15	SS-10	3	+											
			3:00	SS-11	3	+											
			4:00	SS-12	3	+											
			5:00	SS-13	3	+											
			6:00	SS-14	3	+											
			7:00	SS-15	3	+											
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)							
Jason Foster		10/3/90	2040														
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:									
C... ..		10/3/90	2040	[Signature]		10/3/90	2040										

J.V. LOWNEY & ASSOCIATES CHAIN OF CUSTODY RECORD

COMPANY (EPA 8015 MODIFIED)

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:	
718-9A		2 - HAYWARD PARCELS			TPH-GAS/BTEX	TPH-DIESEL	OIL & GREASE	SO3D+E	CHROMAT	J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
SAMPLER(S): (Signature)				REMARKS								
Jason Foster												
DATE	TIME	SAMPLE DESCRIPTION										
10/4/90	9:30	AF-3	GROUND WATER	5	X	X	X	X			3 WEEK TURNAROUND	
	11:00	AF-1		3	X	X						
	12:00	AF-2		3	X	X						
	1:15	AF-4		3	X	X						
	2:00	AF-5		3	X	X						
10/3/90	5:30	HP-13		4	X		X	X			HOLD	
10/2	0910	TRIP BLANK										
Relinquished by: (Signature)				Relinquished by: (Signature)				Date	Time	Received By: (Signature)		
Jason Foster								10/4/90	7:00			
Laboratory of Record:				Received for Laboratory By: (Signature)		Date	Time	Remarks:				
SEQUOIA				Jason Foster		10/4/90	1900					

J.V. LOWNEY & ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:		
SAMPLER(S): (Signature)		DATE			TIME	SAMPLE DESCRIPTION			REMARKS				
718-9A		Two Hayward Parcels		1	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">OIL & GREASE (503 D+E)</div> <div style="border: 1px solid black; width: 100%; height: 100%; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> </div>						J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
(Signature) <i>Jason Foster</i>		10-3			8:00 AM			SS-5 0'-0" SOIL			Normal Turnaround		
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)			
(Signature) <i>Jason Foster</i>		10/5/70	8:00 AM	(Signature) <i>[Signature]</i>		(Signature) <i>[Signature]</i>				(Signature) <i>[Signature]</i>			
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:					
ANAMETRIX				(Signature) <i>[Signature]</i>		10/10/70	0800						

J.V. LOWNEY & ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					SHIP TO:		
SAMPLER(S): (Signature)		DATE			TIME	SAMPLE DESCRIPTION	Oil	+Grease (503 DPE)	REMARKS			
718-9A		Two Hayward Parcels		1	/ / / / /					J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
<i>Jason Foster</i>		10/3/90	9:45		SS-2, 1 ^s -2, Soil	X					1 week TAT	
					SS-2, 2 ^o -2 ^s							
					SS-2, 2 ^s -3 ^o							
					SS-2, 3 ^o -3 ^s							
			↓		SS-2, 3 ^s -4							
			10:30		SS-3, 1 ^s -2							
					SS-3, 2-2 ^s							
			↓		SS-3, 2 ^s -3							
			1:45		SS-9, 1 ^s -2							
					SS-9, 2-2 ^s							
					SS-9, 2 ^s -3							
					SS-9, 3-3 ^s							
			↓	SS-9, 3 ^s -4								
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)		
<i>Jason Foster</i>		10/11/90	9:35	<i>Peter Seffler</i>		<i>Peter Seffler</i>		10/11/90	10:20	<i>Jim McKee</i>		
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:				
SEQUOIA		10/11/90	1138	<i>Charles...</i>								

J.V. LOWNEY & ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED							SHIP TO:			
718-9A		Two Hayward Parcels / Hayward			TTLC+STLC Lead								J.V. LOWNEY & ASSOCIATES 145 Addison Avenue Palo Alto, California 94301 415-328-6920		
SAMPLER(S): (Signature) <i>Steven Teste</i>													REMARKS		
DATE	TIME	SAMPLE DESCRIPTION													
10/3/90	9:00	SS-1, 0 ^s -1, soil		1	X									1 week TAT	
	9:45	SS-2, 0 ^s -1		1	X										
	10:30	SS-3, 0 ^s -1		1	X										
	11:45	SS-5, 0 ^s -1		1	X										
	1:45	SS-9, 0 ^o -0 ^s		1	X										
	3:00	SS-11, 0 ^o -0 ^s		1	X										
	4:00	SS-12, 0 ^o -0 ^s		1	X										
✓	7:00	SS-15, 0 ^o -0 ^s		1	X									✓	
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)					
N/A		10/3/90		N/A											
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:							



Soil, and Hazardous Materials

CHAIN OF CUSTODY REPORT

70-TSB-0

CLIENT: J.V. Wray
 ADDRESS: 145 Addison Ave
Palo Alto, CA 94301
 PHONE: 328-6920
 PROJECT NAME/SITE:

REPORT TO:
Peter Gifford
 BILLING TO:

TURNAROUND TIME:

18 HR.		
24 HR.	48 HR.	72 HR.
5 DAY	10 DAY	15 DAY

SAMPLER: _____ DATE: _____

PO# / BILLING REFERENCE: _____

ANALYSIS REQUESTED										REMARKS	SAMPLE NUMBER
											15804
											05
											06
											07
											08

SAMPLE ID# / STATION	SAMPLE DESCRIPTION	NUMBER OF CONT.	TYPE CONT.	SAMPLING TIME / DATE
SS-1	0-0.5'	1		060584
SS-2	0-0.5'	1		0582
SS-8	0-0.5'	1		0605
SS-10	0-0.5'	1		0611
SS-13	0-0.5'	1		0620

RECEIVED BY: U.P.S.
 RECEIVED BY: [Signature]
 RECEIVED IN LAB BY: _____

TRAVEL TIME: _____
 ON SITE TIME: _____
 OTHER: _____
 WERE SAMPLES PRESERVED ?
 IN GOOD CONDITION?

YES	NO

RELINQUISHED BY: [Signature] DATE: 10/11/90 TIME: 1445
 RELINQUISHED BY: _____ DATE: _____ TIME: _____
 RELINQUISHED BY: _____ DATE: _____ TIME: _____



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: #718-9, Two Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 007-0847

Sampled: Jul 5, 1990
Received: Jul 5, 1990
Extracted: Jul 13, 1990
Analyzed: Jul 16, 1990
Reported: Jul 24, 1990

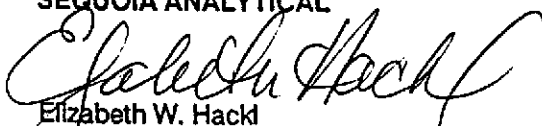
TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
007-0847	AF-1, 0.5-1.0	N.D.
007-0848	AF-1, 4.5-5.0	N.D.
007-0849	AF-2, 0.5-1.0	700
007-0850	AF-2, 4.5-5.0	N.D.
007-0851	AF-3, 0.5-1.0	N.D.
007-0852	AF-3, 4.0-4.5	N.D.

Detection Limits: 30

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

SEQUOIA ANALYTICAL


Elizabeth W. Hack
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: #718-9, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 007-1016

Sampled: Jul 6, 1990
Received: Jul 6, 1990
Extracted: Jul 13, 1990
Analyzed: Jul 16, 1990
Reported: Jul 25, 1990

TOTAL RECOVERABLE PETROLEUM OIL

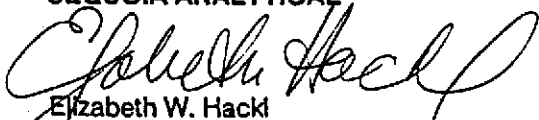
Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
007-1016	AF-4, 0.5-1	6,800
007-1017	AF-4, 4.0-4.5	N.D.
007-1018	AF-5, 0.5-1	6,800
007-1019	AF-5, 4.0-4.5	N.D.
007-1020	EB-4, 0.5-1	N.D.
007-1021	EB-5, 0.5-1	80
007-1022	EB-2, 0.5-1	2,500
007-1023	EB-1, 0.5-1	1,400
007-1024	EB-3, 0.5-1	210

Detection Limits:

30

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

SEQUOIA ANALYTICAL


Elizabeth W. Hackl
Project Manager

71016.JVL <2>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: #718-9, Two Hayward Parcels Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 007-0847	Sampled: Jul 5, 1990 Received: Jul 5, 1990 Analyzed: Jul 19, 1990 Reported: Jul 24, 1990
---------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------

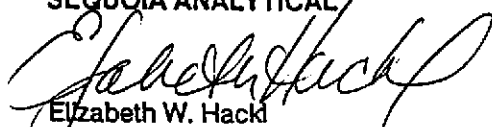
TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
007-0847	AF-1, 0.5-1.0	N.D.	0.0065	N.D.	N.D.	0.0083
007-0848	AF-1, 4.5-5.0	N.D.	0.0091	N.D.	N.D.	0.0065
007-0849	AF-2, 0.5-1.0	N.D.	N.D.	0.0023	N.D.	0.012
007-0850	AF-2, 4.5-5.0	N.D.	0.0062	0.0054	N.D.	0.0094
007-0851	AF-3, 0.5-1.0	N.D.	0.0083	N.D.	N.D.	0.0069
007-0852	AF-3, 4.0-4.5	N.D.	0.0062	N.D.	N.D.	N.D.

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
-------------------	-----	--------	--------	--------	--------

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Elizabeth W. Hackl
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: #718-9, 2 Hayward Parcels Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 007-1016	Sampled: Jul 6, 1990 Received: Jul 6, 1990 Analyzed: Jul 20, 1990 Reported: Jul 25, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
007-1016	AF-4, 0.5-1	N.D.	N.D.	0.0060	N.D.	0.024
007-1017	AF-4, 4.0-4.5	N.D.	N.D.	N.D.	N.D.	0.0056
007-1018	AF-5, 0.5-1	N.D.	N.D.	0.011	N.D.	0.010
007-1019	AF-5, 4.0-4.5	N.D.	N.D.	0.0061	N.D.	0.0058
007-1020	EB-4, 0.5-1	N.D.	N.D.	0.0053	N.D.	0.0065
007-1021	EB-5, 0.5-1	N.D.	N.D.	N.D.	N.D.	N.D.
007-1022	EB-2, 0.5-1	N.D.	0.014	0.013	N.D.	0.0083
007-1023	EB-1, 0.5-1	N.D.	N.D.	1.3	0.014	0.0054
007-1024	EB-3, 0.5-1	N.D.	N.D.	0.0070	N.D.	0.0053

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Elizabeth W. Hackl
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: #718-9, Two Hayward Parcels

QC Sample Group: 0070847 - 0070852

Reported: Jul 24, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Oil & Grease	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	SMS03D&E	EPA 8020/8015	EPA 8020/8015	EPA 8020/8015	EPA 8020/8015
Analyst:	M.K.	M. Lari	M. Lari	M. Lari	M. Lari
Reporting Units:	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Date Analyzed:	Jul 16, 1990	Jul 19, 1990	Jul 19, 1990	Jul 19, 1990	Jul 19, 1990
QC Sample #:	007-0847	007-1200	007-1200	007-1200	007-1200
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	6,200	0.20	0.20	0.20	0.60
Conc. Matrix Spike:	4,200	0.19	0.19	0.21	0.63
Matrix Spike % Recovery:	68	95	95	110	110
Conc. Matrix Spike Dup.:	4,100	0.19	0.19	0.21	0.64
Matrix Spike Duplicate % Recovery:	66	95	95	110	110
Relative % Difference:	2.0	0.0	0.0	0.0	1.6

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Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: #718-9, 2 Hayward Parcels

QC Sample Group: 0071016 - 0071024

Reported: Jul 25, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Oi & Grease
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	SM503D&E
Analyst:	E. Gloria	E. Gloria	E. Gloria	E. Gloria	M. K.
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Jan 20, 1990	Jan 20, 1990	Jan 20, 1990	Jan 20, 1990	Jul 16, 1990
QC Sample #:	007-3513	007-3513	007-3513	007-3513	007-0847
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	0.20	0.20	0.20	0.60	6,200
Conc. Matrix Spike:	0.18	0.18	0.19	0.56	4,200
Matrix Spike % Recovery:	90	90	95	93	68
Conc. Matrix Spike Dup.:	0.19	0.19	0.19	0.59	4,100
Matrix Spike Duplicate % Recovery:	95	95	95	98	66
Relative % Difference:	5.4	5.4	0.0	5.2	2.0

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Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: #718-9, 2 Hayward Parcels
Matrix Descript: Water
Analysis Method: SM 503 A&E (Gravimetric)
First Sample #: 007-1741 D

Sampled: Jul 11, 1990
Received: Jul 12, 1990
Extracted: Jul 17, 1990
Analyzed: Jul 18, 1990
Reported: Jul 24, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
0071741 D	AF-5	N.D.
0071742 D	AF-1	N.D.
0071743 D	AF-3	N.D.
0071744 D	AF-2	N.D.
0071745 D	AF-4	N.D.

Detection Limits:

5.0

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

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Elizabeth W. Hack
Project Manager

71741.JVL <2>



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: #718-9, 2 Hayward Parcels Matrix Descript: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 007-1741	Sampled: Jul 11, 1990 Received: Jul 12, 1990 Analyzed: Jul 12, 1990 Reported: Jul 24, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons	Benzene	Toluene	Ethyl Benzene	Xylenes
		$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)
0071741 A-C	AF-5	N.D.	N.D.	N.D.	N.D.	N.D.
0071742 A-C	AF-1	N.D.	N.D.	N.D.	N.D.	N.D.
0071743 A-C	AF-3	N.D.	N.D.	N.D.	N.D.	N.D.
0071744 A-C	AF-2	N.D.	N.D.	N.D.	N.D.	N.D.
0071745 A-C	AF-4	N.D.	N.D.	N.D.	N.D.	N.D.
0071746 A-C	AF-6	N.D.	N.D.	N.D.	N.D.	N.D.
007-1747	Travel Blank	N.D.	N.D.	N.D.	N.D.	N.D.

Detection Limits:	30	0.30	0.30	0.30	0.30
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

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Elizabeth W. Hack
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: #718-9, 2 Hayward Parcels

QC Sample Group: 0071741 - 0071747

Reported: Jul 24, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Oil & Grease
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	SM503A&E
Analyst:	E. Gloria	E. Gloria	E. Gloria	E. Gloria	L. Laikhtman
Reporting Units:	µg/L	µg/L	µg/L	µg/L	mg/L
Date Analyzed:	Jul 12, 1990	Jul 12, 1990	Jul 12, 1990	Jul 12, 1990	Jul 18, 1990
QC Sample #:	007-1085	007-1085	007-1085	007-1085	BLK071190
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	2.0	2.0	2.0	6.0	100
Conc. Matrix Spike:	2.1	2.0	2.0	5.9	81
Matrix Spike % Recovery:	110	100	100	98	81
Conc. Matrix Spike Dup.:	2.0	1.9	1.9	5.7	84
Matrix Spike Duplicate % Recovery:	100	95	95	95	8.4
Relative % Difference:	4.9	5.1	5.1	3.4	4.0

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Elizabeth W. Hack
Elizabeth W. Hack
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-1 Analysis Method: EPA 8240 Lab Number: 009-0793 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-1 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 009-0793 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates
145 Addison Avenue
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Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-2
Analysis Method: EPA 8240
Lab Number: 009-0794 A-C

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 16, 1990
Reported: Sep 26, 1990

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-2
Analysis Method: EPA 8240 & "Open Scan"
Lab Number: 009-0794 A-C

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 16, 1990
Reported: Sep 26, 1990

VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks $> 5 \mu\text{g/L}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-3 Analysis Method: EPA 8240 Lab Number: 009-0795 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-3 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 009-0795 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates	Client Project ID: P3723, Two Hayward Parcels	Sampled: Sep 7, 1990
145 Addison Avenue	Sample Descript: Water, AF-4	Received: Sep 7, 1990
Palo Alto, CA 94301	Analysis Method: EPA 8240	Analyzed: Sep 16, 1990
Attention: Peter Leffler	Lab Number: 009-0796 A-C	Reported: Sep 26, 1990

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

SEQUOIA ANALYTICAL


 Maile A. McBirney
 Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-4 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 009-0796 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks $> 5 \mu\text{g/L}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-5 Analysis Method: EPA 8240 Lab Number: 009-0797 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
Total 1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis 1,3-Dichloropropene.....	2.0	N.D.
trans 1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
Toluene.....	2.0	N.D.
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

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

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Malle A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-5 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 009-0797 A-C	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 16, 1990 Reported: Sep 26, 1990
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VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks $> 5 \mu\text{g/L}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Method (units): EPA 8240 (µg/L purged)
Analyst(s): S. Fong
QC Sample #: 009-1287

Analyzed: Sep 14, 1990
Reported: Sep 27, 1990

QUALITY CONTROL DATA REPORT

Analyte	Sample Conc.	Spike Conc. Added	Conc. Matrix Spike	Matrix Spike % Recovery	Conc. Matrix Spike Duplicate	Matrix Spike % Recovery	Relative % Difference
1,1-Dichloroethene	N.D.	50	40	80	43	86	7.2
Trichloroethene	N.D.	50	45	90	48	96	6.5
Benzene	N.D.	50	44	88	47	94	6.6
Toluene	N.D.	50	47	94	49	98	4.2
Chlorobenzene	N.D.	50	49	98	52	104	5.9

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Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-1 Analysis Method: EPA 8270 Lab Number: 009-0793 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-1
Analysis Method: EPA 8270
Lab Number: 009-0793

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	10	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	2.0	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	10	N.D.
N-Nitrosodiphenylamine.....	2.0	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	10	N.D.
Phenanthrene.....	2.0	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	10	N.D.
2,4,6-Trichlorophenol.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-1
Analysis Method: EPA 8270 & "Open Scan"
Lab Number: 009-0793 I

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-2 Analysis Method: EPA 8270 Lab Number: 009-0794 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-2 Analysis Method: EPA 8270 Lab Number: 009-0794 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	10	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	2.0	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	10	N.D.
N-Nitrosodiphenylamine.....	2.0	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	10	N.D.
Phenanthrene.....	2.0	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	10	N.D.
2,4,6-Trichlorophenol.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Maile A. McBirney
Maile A. McBirney
Project Manager



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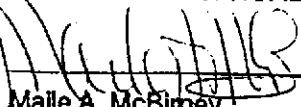
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-2 Analysis Method: EPA 8270 & "Open Scan" Lab Number: 009-0794 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
Unidentifiable Compounds	2.0	300

No additional peaks > 2 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-3 Analysis Method: EPA 8270 Lab Number: 009-0795 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-3 Analysis Method: EPA 8270 Lab Number: 009-0795 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	10	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	2.0	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	10	N.D.
N-Nitrosodiphenylamine.....	2.0	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	10	N.D.
Phenanthrene.....	2.0	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	10	N.D.
2,4,6-Trichlorophenol.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-3
Analysis Method: EPA 8270 & "Open Scan"
Lab Number: 009-0795 I

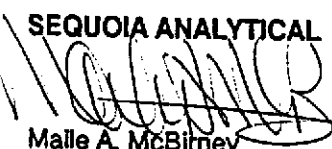
Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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No additional peaks > 5 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-4 Analysis Method: EPA 8270 Lab Number: 009-0796 1	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-4 Analysis Method: EPA 8270 Lab Number: 009-0796 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	10	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	2.0	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	10	N.D.
N-Nitrosodiphenylamine.....	2.0	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	10	N.D.
Phenanthrene.....	2.0	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	10	N.D.
2,4,6-Trichlorophenol.....	2.0	N.D.

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

SEQUOIA ANALYTICAL

M. A. McBirney
Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-4
Analysis Method: EPA 8270 & "Open Scan"
Lab Number: 009-0796 I

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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Unidentifiable Compounds	2.0	330
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No additional peaks > 2 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-5 Analysis Method: EPA 8270 Lab Number: 009-0797 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	2.0	N.D.
Acenaphthylene.....	2.0	N.D.
Aniline.....	2.0	N.D.
Anthracene.....	2.0	N.D.
Benzidine.....	50	N.D.
Benzoic Acid.....	10	N.D.
Benzo(a)anthracene.....	2.0	N.D.
Benzo(b)fluoranthene.....	2.0	N.D.
Benzo(k)fluoranthene.....	2.0	N.D.
Benzo(g,h,i)perylene.....	2.0	N.D.
Benzo(a)pyrene.....	2.0	N.D.
Benzyl alcohol.....	2.0	N.D.
Bis(2-chloroethoxy)methane.....	2.0	N.D.
Bis(2-chloroethyl)ether.....	2.0	N.D.
Bis(2-chloroisopropyl)ether.....	2.0	N.D.
Bis(2-ethylhexyl)phthalate.....	10	N.D.
4-Bromophenyl phenyl ether.....	2.0	N.D.
Butyl benzyl phthalate.....	2.0	N.D.
4-Chloroaniline.....	2.0	N.D.
2-Chloronaphthalene.....	2.0	N.D.
4-Chloro-3-methylphenol.....	2.0	N.D.
2-Chlorophenol.....	2.0	N.D.
4-Chlorophenyl phenyl ether.....	2.0	N.D.
Chrysene.....	2.0	N.D.
Dibenz(a,h)anthracene.....	2.0	N.D.
Dibenzofuran.....	2.0	N.D.
Di-N-butyl phthalate.....	10	N.D.
1,3-Dichlorobenzene.....	2.0	N.D.
1,4-Dichlorobenzene.....	2.0	N.D.
1,2-Dichlorobenzene.....	2.0	N.D.
3,3-Dichlorobenzidine.....	10	N.D.
2,4-Dichlorophenol.....	2.0	N.D.
Diethyl phthalate.....	2.0	N.D.
2,4-Dimethylphenol.....	2.0	N.D.
Dimethyl phthalate.....	2.0	N.D.
4,6-Dinitro-2-methylphenol.....	10	N.D.
2,4-Dinitrophenol.....	10	N.D.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-5 Analysis Method: EPA 8270 Lab Number: 009-0797 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
2,4-Dinitrotoluene.....	2.0	N.D.
2,6-Dinitrotoluene.....	2.0	N.D.
Di-N-octyl phthalate.....	2.0	N.D.
Fluoranthene.....	2.0	N.D.
Fluorene.....	2.0	N.D.
Hexachlorobenzene.....	2.0	N.D.
Hexachlorobutadiene.....	2.0	N.D.
Hexachlorocyclopentadiene.....	2.0	N.D.
Hexachloroethane.....	2.0	N.D.
Indeno(1,2,3-cd)pyrene.....	2.0	N.D.
Isophorone.....	2.0	N.D.
2-Methylnaphthalene.....	2.0	N.D.
2-Methylphenol.....	2.0	N.D.
4-Methylphenol.....	2.0	N.D.
Naphthalene.....	2.0	N.D.
2-Nitroaniline.....	10	N.D.
3-Nitroaniline.....	10	N.D.
4-Nitroaniline.....	10	N.D.
Nitrobenzene.....	2.0	N.D.
2-Nitrophenol.....	2.0	N.D.
4-Nitrophenol.....	10	N.D.
N-Nitrosodiphenylamine.....	2.0	N.D.
N-Nitroso-di-N-propylamine.....	2.0	N.D.
Pentachlorophenol.....	10	N.D.
Phenanthrene.....	2.0	N.D.
Phenol.....	2.0	N.D.
Pyrene.....	2.0	N.D.
1,2,4-Trichlorobenzene.....	2.0	N.D.
2,4,5-Trichlorophenol.....	10	N.D.
2,4,6-Trichlorophenol.....	2.0	N.D.

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

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-5 Analysis Method: EPA 8270 & "Open Scan" Lab Number: 009-0797 I	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 11, 1990 Analyzed: Sep 20, 1990 Reported: Sep 27, 1990
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SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
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Unidentifiable Compounds	2.0	28
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No additional peaks > 2 $\mu\text{g/L}$ were identified by the Mass Spectral Library.

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Malle A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Method: EPA 8270
Analyst(s): T. Fowler
QC Sample #: BLK091290

Extracted: Sep 11, 1990
Analyzed: Sep 20, 1990
Reported: Sep 27, 1990

QUALITY CONTROL DATA REPORT

Analyte	Sample Conc.	Spike Conc. Added	Conc. Matrix Spike	Matrix Spike % Recovery	Conc. Matrix Spike Duplicate	Matrix Spike Duplicate % Recovery	Relative % Difference
Phenol	N.D.	100	30	30	33	33	9.5
2-Chlorophenol	N.D.	100	61	61	66	66	7.9
1,4-Dichlorobenzene	N.D.	50	25	50	28	56	11
N-Nitroso-Di-N-propylamine	N.D.	50	33	66	33	66	0
1,2,4-Trichlorobenzene	N.D.	50	26	52	28	56	7.4
4-Chloro-3-Methylphenol	N.D.	100	66	66	72	72	8.7
Acenaphthene	N.D.	50	32	64	33	66	3.2
4-Nitrophenol	N.D.	100	25	25	31	31	21
2,4-Dinitrotoluene	N.D.	50	39	78	40	80	2.5
Pentachlorophenol	N.D.	100	68	68	76	76	11
Pyrene	N.D.	50	56	112	59	48	5.2

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M. A. McBirney
Maile A. McBirney
Project Manager

% Recovery: $\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-1 Analysis Method: EPA 8080 Lab Number: 009-0793 H	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 14, 1990 Analyzed: Sep 14, 1990 Reported: Sep 26, 1990
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ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor expoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

SEQUOIA ANALYTICAL

Maile A. McBirney
Maile A. McBirney
Project Manager



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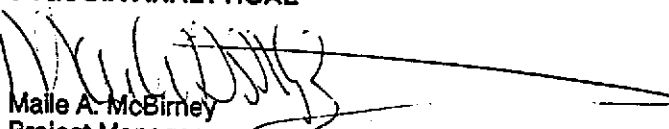
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-2 Analysis Method: EPA 8080 Lab Number: 009-0794 H	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 14, 1990 Analyzed: Sep 14, 1990 Reported: Sep 26, 1990
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ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor epoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates	Client Project ID: P3723, Two Hayward Parcels	Sampled: Sep 7, 1990
145 Addison Avenue	Sample Descript: Water, AF-3	Received: Sep 7, 1990
Palo Alto, CA 94301	Analysis Method: EPA 8080	Extracted: Sep 14, 1990
Attention: Peter Leffler	Lab Number: 009-0795 H	Analyzed: Sep 14, 1990
		Reported: Sep 26, 1990

ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor epoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager



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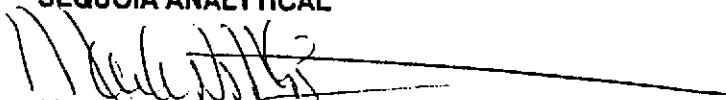
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-4 Analysis Method: EPA 8080 Lab Number: 009-0796 H	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Extracted: Sep 14, 1990 Analyzed: Sep 14, 1990 Reported: Sep 26, 1990
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ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor epoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-5
Analysis Method: EPA 8080
Lab Number: 009-0797 H

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 14, 1990
Analyzed: Sep 14, 1990
Reported: Sep 26, 1990

ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
Aldrin.....	0.10	N.D.
alpha-BHC.....	0.050	N.D.
beta-BHC.....	0.050	N.D.
delta-BHC.....	0.050	N.D.
gamma-BHC (Lindane).....	0.40	N.D.
Chlordane.....	0.15	N.D.
4,4'-DDD.....	0.10	N.D.
4,4'-DDE.....	0.050	N.D.
4,4'-DDT.....	0.10	N.D.
Dieldrin.....	0.10	N.D.
Endosulfan I.....	0.15	N.D.
Endosulfan II.....	0.10	N.D.
Endosulfan sulfate.....	0.75	N.D.
Endrin.....	0.010	N.D.
Endrin aldehyde.....	0.25	N.D.
Heptachlor.....	0.10	N.D.
Heptachlor epoxide.....	0.10	N.D.
Methoxychlor.....	10	N.D.
Toxaphene.....	0.50	N.D.
PCB-1016.....	1.0	N.D.
PCB-1221.....	1.0	N.D.
PCB-1232.....	1.0	N.D.
PCB-1242.....	1.0	N.D.
PCB-1248.....	1.0	N.D.
PCB-1254.....	1.0	N.D.
PCB-1260.....	1.0	N.D.

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels QC Sample Group: 0090793-7	Sep 7, 1990 Reported: Sep 26, 1990
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QUALITY CONTROL DATA REPORT

ANALYTE	gamma - BHC	Aldrin	Dieldrin
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Method:	EPA 8080	EPA 8080	EPA 8080
Analyst:	D. Tran	D. Tran	D. Tran
Reporting Units:	µg/L	µg/L	µg/L
Date Analyzed:	Sep 14, 1990	Sep 14, 1990	Sep 14, 1990
QC Sample #:	Blank	Blank	Blank
Sample Conc.:	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	20
Conc. Matrix Spike:	8.9	8.7	18
Matrix Spike % Recovery:	89	87	90
Conc. Matrix Spike Dup.:	10	9.0	18
Matrix Spike Duplicate % Recovery:	100	90	90
Relative % Difference:	12	3.4	0

SEQUOIA ANALYTICAL

Malle A. McBlirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water, AF-1
Lab Number: 009-0793 E

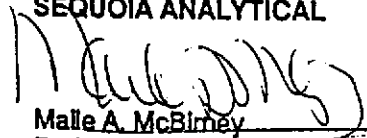
Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 14, 1990
Reported: Sep 26, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Antimony.....	500	N.D.
Arsenic.....	100	180
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	190
Copper.....	10	92
Lead.....	50.0	N.D.
Mercury.....	0.2	N.D.
Nickel.....	50	N.D.
Selenium.....	50	100
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	200

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

SEQUOIA ANALYTICAL


Malle A. McBimney
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates	Client Project ID: P3723, Two Hayward Parcels	Sampled: Sep 7, 1990
145 Addison Avenue	Sample Descript: Water, AF-2	Received: Sep 7, 1990
Palo Alto, CA 94301		Analyzed: Sep 14, 1990
Attention: Peter Leffler	Lab Number: 009-0794 E	Reported: Sep 26, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Antimony.....	500	N.D.
Arsenic.....	50	58
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	62
Copper.....	10	24
Lead.....	50.0	N.D.
Mercury.....	0.2	N.D.
Nickel.....	50	94
Selenium.....	50	N.D.
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	64

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

SEQUOIA ANALYTICAL

Maile A. McBirney
 Maile A. McBirney
 Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233


J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-3 Lab Number: 009-0795 E	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 14, 1990 Reported: Sep 26, 1990
---------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Antimony.....	500	N.D.
Arsenic.....	50	120
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	190
Copper.....	10	120
Lead.....	50.0	N.D.
Mercury.....	0.2	N.D.
Nickel.....	50	190
Selenium.....	50	63
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	250

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-4 Lab Number: 009-0796 E	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 18, 1990 Reported: Sep 26, 1990
---------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Antimony.....	500	N.D.
Arsenic.....	50	99
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	230
Copper.....	10	90
Lead.....	25.0	25
Mercury.....	0.2	N.D.
Nickel.....	50	350
Selenium.....	50	55
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	280

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2-Hayward Parcels Matrix Descript: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 010-0873 A-B	Sampled: 10/3 & 10/4/90 Received: Oct 4, 1990 Analyzed: Oct 9, 1990 Reported: Oct 22, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

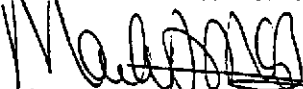
Sample Number	Sample Description	Low/Medium B.P.	Benzene	Toluene	Ethyl Benzene	Xylenes
		Hydrocarbons µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)
010-0873	AF-3	N.D.	N.D.	N.D.	N.D.	N.D.
010-0874	AF-1	N.D.	N.D.	N.D.	N.D.	N.D.
010-0875	AF-2	N.D.	N.D.	N.D.	N.D.	N.D.
010-0876	AF-4	N.D.	N.D.	N.D.	N.D.	N.D.
010-0877	AF-5	N.D.	N.D.	N.D.	N.D.	N.D.
010-0878	HP-13	N.D.	N.D.	N.D.	N.D.	N.D.

J. V. LOWNEY ASSOC.
OCT 24 1990
RECEIVED

Detection Limits:	30	0.30	0.30	0.30	0.30
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard. Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

\$110



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2-Hayward Parcels
Matrix Descript: Water
Analysis Method: EPA 3510/8015
First Sample #: 010-0873

Sampled: 10/3 & 10/4/90
Received: Oct 4, 1990
Extracted: Oct 8, 1990
Analyzed: Oct 10, 1990
Reported: Oct 22, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	Motor Oil $\mu\text{g/L}$ (ppb)
010-0873	AF-3	N.D.
010-0874	HP-13	N.D.

Detection Limits:

50

High Boiling Point Hydrocarbons are quantitated against a motor oil fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager



SEQUOIA ANALYTICAL

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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2-Hayward Parcels Matrix Descript: Water Analysis Method: SM 503 A&E (Gravimetric) First Sample #: 010-0873 D	Sampled: 10/3 & 10/4/90 Received: Oct 4, 1990 Extracted: Oct 8, 1990 Analyzed: Oct 9, 1990 Reported: Oct 22, 1990
---------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
010-0873	AF-3	N.D.
010-0878	HP-13	N.D.

Detection Limits: 5.0

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

100873.JVL <4>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2-Hayward Parcels

QC Sample Group: 100873-78

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl benzene	Xylenes	High B.P. Hydrocarbons	Oil & Grease
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Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	SM 503 A&E
Analyst:	E. Gloria/W. Parks	E. Gloria/W. Parks	Gloria/Parks	Gloria/Parks	M. Ramos	Laikhtman/Gill
Reporting Units:	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
Date Analyzed:	Oct 9, 1990	Oct 9, 1990	Oct 9, 1990	Oct 9, 1990	Oct 10, 1990	Oct 9, 1990
QC Sample #:	009-3795	009-3795	009-3795	009-3795	D.I.	BLK10/8/90

Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30	300	100
Conc. Matrix Spike:	11	10	10	32	340	110
Matrix Spike % Recovery:	110	100	100	110	110	110
Conc. Matrix Spike Dup.:	10	9.2	8.9	29	260	110
Matrix Spike Duplicate % Recovery:	100	92	89	97	87	110
Relative % Difference:	9.5	8.3	12	9.8	25	0

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Langtry

Client Project ID: Hayward Parcels, Hayward
Sample Descript: Soil
Analysis for: Lead, TTLC & STLC
First Sample #: R0100585

Sampled: Oct 31, 1990
Received: Oct 31, 1990
Relogged: Jan 2, 1990
Analyzed: Nov 6, 1990
Reported: Nov 7, 1990

LABORATORY ANALYSIS FOR:

Lead, TTLC & STLC

Sample Number	Sample Description	TTLC Detection Limit mg/kg	TTLC Sample Result mg/kg	STLC Detection Limit mg/L	STLC Sample Result mg/L
010-0585	SS-1	0.25	140	0.0050	3.6
010-0588	SS-2	0.25	42	0.0050	0.72
010-0591	SS-3	0.25	270	0.0050	9.9
010-0597	SS-5	0.25	24	0.0050	0.32
010-0608	SS-9	0.25	180	0.0050	1.7
010-0614	SS-11	0.25	7.9	0.0050	0.24
010-0617	SS-12	0.25	390	0.0050	0.70
010-0626	SS-15	0.25	27	0.0050	0.34

J. V. LOWNEY ASSOC.
NOV 8 1990
RECEIVED

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

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager



SEQUOIA ANALYTICAL

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(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Langtry

Client Project ID: Hayward Parcels, Hayward

QC Sample Group: 0100585 - 0100626

Reported: Nov 7, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Lead TTLIC	Lead STLC
---------	---------------	--------------

Method:	EPA 7421	EPA 6010
Analyst:	R.Eastman	B.Oliver
Reporting Units:	mg/L	mg/L
Date Analyzed:	Nov 5, 1990	Nov 6, 1990
QC Sample #:	010-0626	011-0140

Sample Conc.: 27 N.D.

Spike Conc. Added: 50 10

Conc. Matrix Spike: 74 9.7

Matrix Spike % Recovery: 94 97

Conc. Matrix Spike Dup.: 77 9.0

Matrix Spike Duplicate % Recovery: 100 90

Relative % Difference: 4.0 7.5

SEQUOIA ANALYTICAL

M. A. McBurney
Maile A. McBurney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

ANAMETRIX INC

Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198



REPORT

Peter Leffler
J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301

July 24, 1990
Anamatrix W.O.#: 9007078
Date Received : 07/12/90
Project No. : 718-9

Dear Mr. Leffler:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS.

NOTE: 1) Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.



Arun Patel
Prep Lab Supervisor

AP/kd

J.V. LOWNEY & ASSOC

JUL 26 1990

F.

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : J.V. Lowney & Associates
 Address : 145 Addison Avenue
 City : Palo Alto, CA 94301
 Attn. : Peter Leffler

Anamatrix W.O.#: 9007078
 Date Received : 07/12/90
 Purchase Order#: N/A
 Project No. : 718-9
 Date Released : 07/24/90

Anamatrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
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RESULTS


9007078-01	AF-3 GROUNDWATER	WATER	07/11/90	503E	07/13/90	07/13/90	N/A
9007078-02	EB-3, SOIL, OS-1	SOIL	07/11/90	503E	07/13/90	07/13/90	N/A
9007078-01	AF-3 GROUNDWATER	WATER	07/11/90	503D	07/13/90	07/13/90	N/A
9007078-02	EB-3, SOIL, OS-1	SOIL	07/11/90	503D	07/13/90	07/13/90	N/A

Note: Soil sample EB-3 was mislabeled. It should be EB-2.

PMLe 7/31/90

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE - 503E
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9
 Matrix : WATER
 Date sampled : 07/11/90
 Date ext. TOG: 07/13/90
 Date anl. TOG: 07/13/90

Anamatrix I.D. : 9007078
 Analyst : KK
 Supervisor : 
 Date released : 07/24/90.

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9007078-01	AF-3 GROUNDWATER	5	ND

ND - Not detected at or above the practical quantitation limit for the method.

TOG - Total Oil & Grease is determined by Standard Method 503E.

-All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE - 503E
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9
 Matrix : SOIL
 Date sampled : 07/11/90
 Date ext. TOG: 07/13/90
 Date anl. TOG: 07/13/90

Anamatrix I.D. : 9007078
 Analyst : KK
 Supervisor : GP
 Date released : 07/24/90

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9007078-02	EB-3,SOIL,OS-1	30	660

ND - Not detected at or above the practical quantitation limit for the method.
 TOG - Total Oil & Grease is determined by Standard Method 503E.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE - 503D
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9
 Matrix : WATER
 Date sampled : 07/11/90
 Date ext. TOG: 07/13/90
 Date anl. TOG: 07/13/90

Anamatrix I.D. : 9007078
 Analyst : KK
 Supervisor : AP
 Date released : 07/24/90


Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9007078-01	AF-3 GROUNDWATER	5	ND

ND - Not detected at or above the practical quantitation limit for the method.
 TOG - Total Oil & Grease is determined by Standard Method 503D.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE - 503D
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9
 Matrix : SOIL
 Date sampled : 07/11/90
 Date ext. TOG: 07/13/90
 Date anl. TOG: 07/13/90

Anamatrix I.D. : 9007078
 Analyst : KK
 Supervisor : 
 Date released : 07/24/90

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9007078-02	EB-3,SOIL,OS-1	30	1200

ND - Not detected at or above the practical quantitation limit for the method.
 TOG - Total Oil & Grease is determined by Standard Method 503D.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANAMETRIX INC

Environmental & Analytical Chemistry
 961 Concourse Drive, Suite E, San Jose, CA 95131
 (408) 432-8192 • Fax (408) 432-8198

**REPORT**

PETER LEFFLER
 J.V. LONEY & ASSOCIATES
 145 ADDISON AVENUE
 PALO ALTO, CA 94301

Workorder # : 9009072
 Date Received : 09/10/90
 Project ID : P3723
 Purchase Order: N/A

The following samples were received at Anamatrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9009072- 1	AF-3

This report is paginated for your convenience and ease of review. It contains 4 pages excluding the cover letter. The report is organized into sections. Each section contains all analytical results and quality assurance data related to a specific group or section within Anamatrix. The Report Summary that precedes each section will help you determine which group at Anamatrix generated the data. The Report Summary will contain the signatures of the department supervisor and a chemist, both of whom reviewed the analytical data. Please refer all questions to the department supervisor that signed the form.

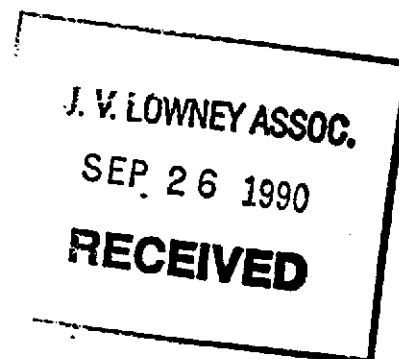
If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anamatrix.

Burt Sutherland

Burt Sutherland
 Laboratory Director

09-25-90

Date



REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

PETER LEFFLER
J.V. LONEY & ASSOCIATES
145 ADDISON AVENUE
PALO ALTO, CA 94301

Workorder # : 9009072
Date Received : 09/10/90
Project ID : P3723
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- Sample was received cold and in good condition.

Peter Leffler Sept. 25th 1990.
Department Supervisor Date

Maria E. Sumner 9-25-90
Chemist Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

PETER LEFFLER
J.V.LOWNEY & ASSOCIATES
145 ADDISON AVENUE
PALO ALTO, CA 94301

Workorder # : 9009072
Date Received : 09/10/90
Project ID : P3723
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9009072- 1	AF-3	H2O	09/07/90	503A
9009072- 1	AF-3	H2O	09/07/90	503E

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
 ANAMETRIX, INC. (408) 432-8192

Project # : P3723
 Matrix : WATER
 Date sampled : 09/07/90
 Date ext. TOG: 09/13/90
 Date anl. TOG: 09/13/90

Anamatrix I.D. : 9009072
 Analyst : *m6*
 Supervisor : *(signature)*
 Date released : 09/25/90


Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9009072-01	AF-3	5	ND

ND - Not detected at or above the practical quantitation limit for the method.
 TOG - Total Oil & Grease is determined by Standard Method 503A.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
 ANAMETRIX, INC. (408) 432-8192

Project # : P3723
 Matrix : WATER
 Date sampled : 09/07/90
 Date ext. TOG: 09/13/90
 Date anl. TOG: 09/13/90

Anamatrix I.D. : 9009072-01
 Analyst : ME
 Supervisor : 
 Date released : 09/25/90

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9009072-01	AF-3	5	ND

ND - Not detected at or above the practical quantitation limit for the method.
 TOG - Total Oil & Grease is determined by Standard Method 503E.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANAMETRIX INC

Environmental & Analytical Chemistry
 61 Concourse Drive, Suite E, San Jose, CA 95131
 (408) 432-8192 • Fax (408) 432-8198

**REPORT**

MR. STASON FOSTER
 J.V. LOWNEY & ASSOCIATES
 145 ADDISON AVENUE
 PALO ALTO, CA 94301

Workorder # : 9010077
 Date Received : 10/05/90
 Project ID : 718-9A
 Purchase Order: N/A

The following samples were received at Anamatrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9010077- 1	SS-5

This report is paginated for your convenience and ease of review. It contains 2 pages excluding the cover letter. The report is organized into sections. Each section contains all analytical results and quality assurance data related to a specific group or section within Anamatrix. The Report Summary that precedes each section will help you determine which group at Anamatrix generated the data. The Report Summary will contain the signatures of the department supervisor and a chemist, both of whom reviewed the analytical data. Please refer all questions to the department supervisor that signed the form.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anamatrix.

Burt Sutherland

 Burt Sutherland
 Laboratory Director

10-25-90

 Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. STASON FOSTER
J.V. LONEY & ASSOCIATES
145 ADDISON AVENUE
PALO ALTO, CA 94301

Workorder # : 9010077
Date Received : 10/05/90
Project ID : 718-9A
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9010077- 1	SS-5	SOIL	10/03/90	5520EF

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. STASON FOSTER
J.V. LONEY & ASSOCIATES
145 ADDISON AVENUE
PALO ALTO, CA 94301

Workorder # : 9010077
Date Received : 10/05/90
Project ID : 718-9A
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for this samples.

[Signature]

Department Supervisor

Oct, 24th 1990.

Date

[Signature]

Chemist

10/25/90

Date

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
 ANAMETRIX, INC. (408) 432-8192

Project # : 718-9A
 Matrix : SOIL
 Date sampled : 10/03/90
 Date ext. TOG: 10/20/90
 Date anl. TOG: 10/20/90

Anamatrix I.D. : 9010077
 Analyst : *kk*
 Supervisor : *(AP)*
 Date released : 10/24/90

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9010077-01	SS-5	30	40
GSBL102090	METHOD BLANK	30	ND

ND - Not detected at or above the practical quantitation limit for the method.
 TOG - Total Oil & Grease is determined by Standard Method 5520E&F.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

October 30, 1990

Peter Leffler, Project Leader
J. V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301

Dear Mr. Leffler:

Enclosed are the results of the analyses of the samples
submitted on October 12, 1990 from Project Soil Analysis.

We appreciate this opportunity to be of service to you on
this project. If you have any questions regarding this
material, or if you just want to discuss any aspect of your
projects, please do not hesitate to contact me.

Sincerely,

James E. Bruya, Ph.D.

James E. Bruya, Ph.D.

JEB/fae

Enclosures

J. V. LOWNEY ASSOC.

NOV 5 1990

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: October 30, 1990
Date Submitted: October 12, 1990
Project: Soil Analysis

RESULTS OF ANALYSES OF THE SOIL SAMPLES
FOR CONTAMINANT CHARACTERIZATION
BY THIN LAYER CHROMATOGRAPHY

Sample #

TLC Characterization

SS-1

The TLC chromatogram showed a pattern similar to that of used engine oil. This characterization is based on the presence of a band having an Rf (hexane) of 0.9, visible under staining with iodine and a second band having an Rf (methylene chloride) of 1.0, visible under UV light. There was also several bands showing an Rf (methylene chloride) of <1 which is indicative of oxygenated organic compounds.

SS-2

The TLC chromatogram showed a pattern similar to that of an asphaltic material. This characterization is based on the presence of a band having an Rf (hexane) of ca 0.5 to 0.0, visible under staining with iodine and visible under both short and long wave UV light.

SS-8

The TLC chromatogram showed a pattern similar to that of used engine oil. This characterization is based on the presence of a band having an Rf (hexane) of 0.9, visible under staining with iodine and a second band having an Rf (methylene chloride) of 1.0, visible under UV light. There was also several bands showing an Rf (methylene chloride) of <1 which is indicative of oxygenated organic compounds. This material appeared to be similar to that seen in sample SS-1 above.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: October 30, 1990

Date Submitted: October 12, 1990

Project: Soil Analysis

RESULTS OF ANALYSES OF THE SOIL SAMPLES
FOR CONTAMINANT CHARACTERIZATION
BY THIN LAYER CHROMATOGRAPHY

Sample #

TLC Characterization

SS-10

The TLC chromatogram showed a pattern similar to that of an asphaltic material. This characterization is based on the presence of a band having an Rf (hexane) of ca 0.5 to 0.0, visible under staining with iodine and visible under both short and long wave UV light. This material appeared to be similar to that seen in sample SS-2 above.

SS-13

The TLC chromatogram showed a pattern similar to that of an asphaltic material. This characterization is based on the presence of a band having an Rf (hexane) of ca 0.5 to 0.0, visible under staining with iodine and visible under both short and long wave UV light. This material appeared to be similar to that seen in sample SS-2 and SS-10 above.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: October 30, 1990

Date Submitted: October 12, 1990

Project: Soil Analysis

RESULTS OF ANALYSES OF THE SOIL SAMPLES
FOR FINGERPRINT CHARACTERIZATION
BY CAPILLARY GAS CHROMATOGRAPHY

Sample #

GC Characterization

SS-1

The gas chromatographic trace did not show the presence of significant levels of volatile or semi-volatile contamination. Very low levels of some compounds were seen, however, the level found was comparable to that found in blank samples.

SS-8

The gas chromatographic trace was indicative of a high boiling petroleum product, such as motor oil. This characterization is based on the presence of a relatively smooth envelope of peaks present from ca $n-C_{17}$ to $n-C_{34}$ with a maximum at $n-C_{27}$.

SS-13

The gas chromatographic trace did not show the presence of significant levels of volatile or semi-volatile contamination.

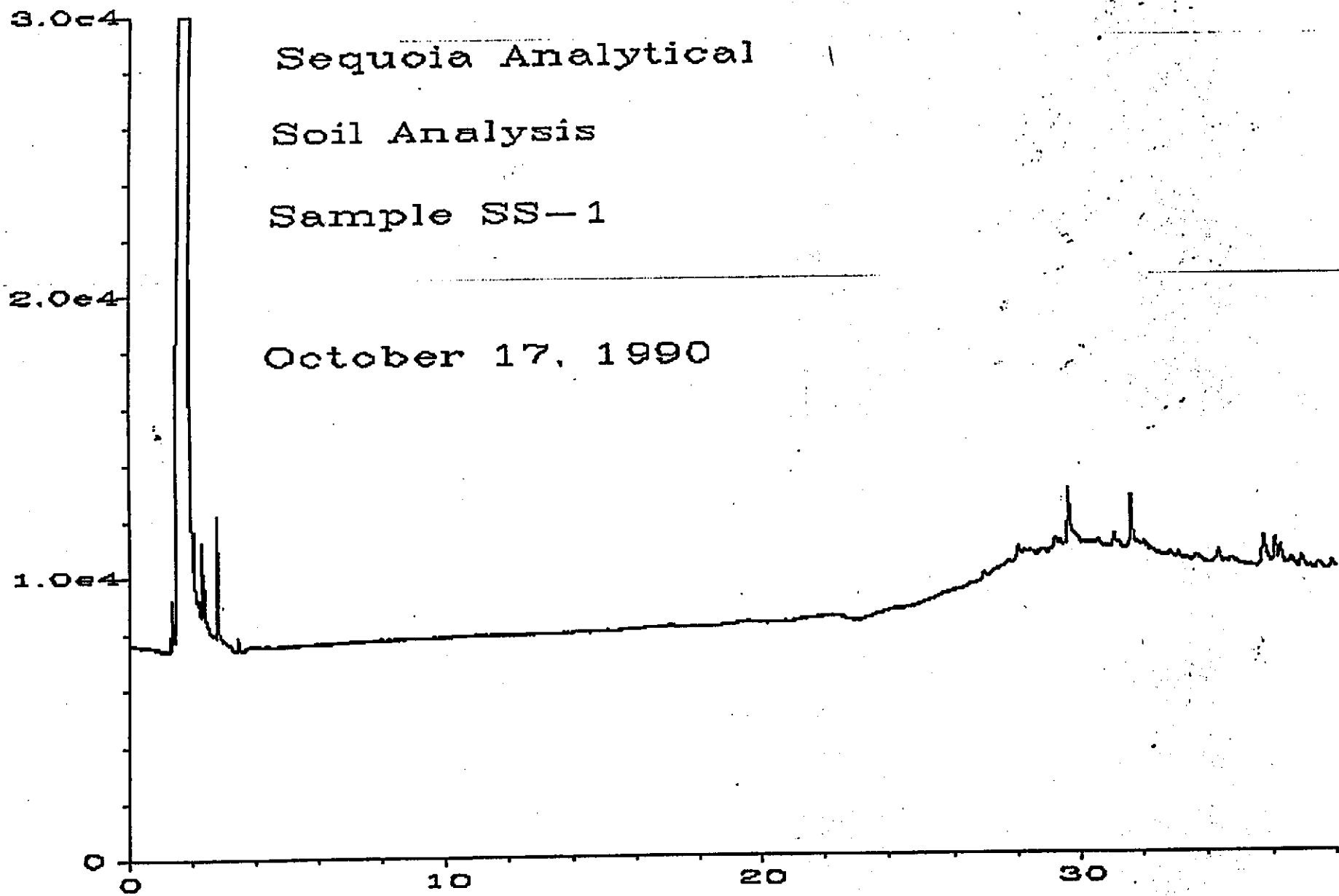


Fig. 1 in A:\0009F0401.D

3.0e4

Sequoia Analytical

Soil Analysis

Sample SS-8

2.0e4

October 17, 1990

1.0e4

0

10

20

30

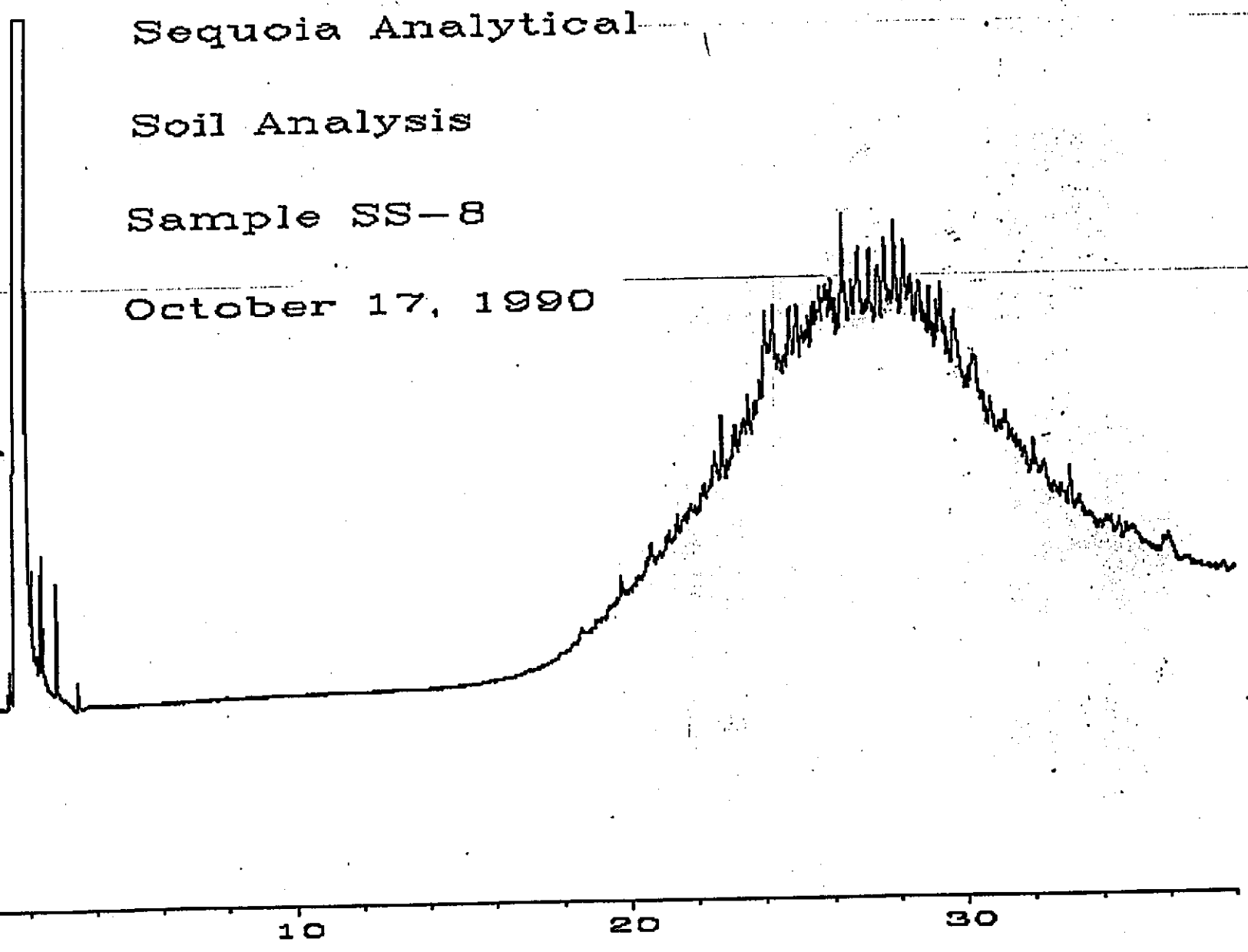


Fig. 1 in A:\010FO401.D

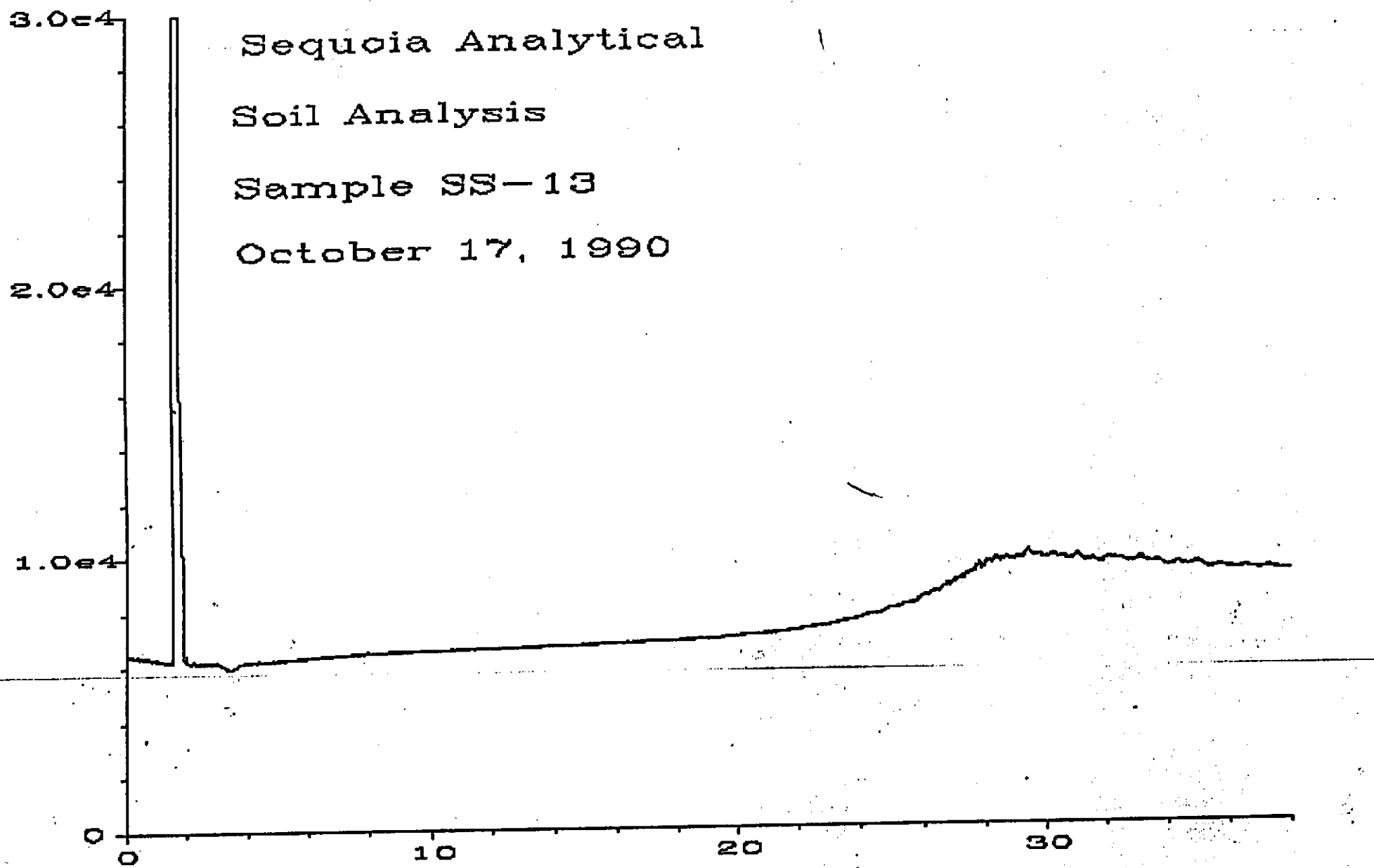


Fig. 1 in A:\011F0401.D



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
 (415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates	Client Project ID: P4025	Sampled: May 1, 1991
145 Addison Avenue	Sample Descript: Soil	Received: May 1, 1991
Palo Alto, CA 94301	Analysis for: pH	
Attention: Peter Leffler	First Sample #: 105-0111	Analyzed: May 2, 1991
		Reported: May 16, 1991

LABORATORY ANALYSIS FOR: pH

Sample Number	Sample Description	Detection Limit	Sample Result
105-0111	HS-4, O5-1	N.A.	8.8
105-0112	HS-5, O5-1	N.A.	8.4
105-0113	HS-9, O5-1	N.A.	12
105-0114	HS-10, O5-1	N.A.	9.6
105-0115	HS-11, O5-1	N.A.	10
105-0116	HS-12, O5-1	N.A.	8.6

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

SEQUOIA ANALYTICAL

Malle McBirney Springer
 Malle McBirney Springer
 Project Manager

1050111.JVL <1>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
 (415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P4025 Sample Descript: Water Analysis for: pH First Sample #: 105-0117	Sampled: May 1, 1991 Received: May 1, 1991 Analyzed: May 2, 1991 Reported: May 16, 1991
---------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------

LABORATORY ANALYSIS FOR: pH

Sample Number	Sample Description	Detection Limit	Sample Result
105-0117	HP-1	N.A.	8.9
105-0118	HP-2	N.A.	9.5
105-0119	HP-3	N.A.	8.7

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

SEQUOIA ANALYTICAL

Maria Moberley Springer
 Maria Moberley Springer
 Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94083
 (415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates	Client Project ID: P4025	Sampled: May 1, 1991
145 Addison Avenue	Matrix Descript: Soil	Received: May 1, 1991
Palo Alto, CA 94301	Analysis Method: SM 5520 E&F (Gravimetric)	Extracted: May 2, 1991
Attention: Peter Leffler	First Sample #: 105-0111	Analyzed: May 2, 1991
		Reported: May 3, 1991

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
105-0111	HS-4, O5-1	130
105-0112	HS-5, O5-1	780
105-0113	HS-9, O5-1	370
105-0114	HS-10, O5-1	41
105-0115	HS-11, O5-1	N.D.
105-0116	HS-12, O5-1	260

Detection Limits:

30

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

SEQUOIA ANALYTICAL

Malle Springer
 Malle McBirney Springer
 Project Manager

1050111.JVL <3>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
 (415) 364-9800 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: Relog Matrix Descript: Soil Analysis Method: SM 5520 B&F (Gravimetric) First Sample #: 105-0111	Sampled: May 1, 1991 Received: May 1, 1991 Extracted: May 7, 1991 Analyzed: May 7, 1991 Reported: May 16, 1991
---------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------

**STLC WITH DI EXTRACT FOR:
 TOTAL RECOVERABLE PETROLEUM OIL**

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
105-0111	HS-4	N.D.
105-0112	HS-5	N.D.
105-0113	HS-9	N.D.
105-0114	HS-10	N.D.
105-0115	HS-11	(N.D. on original extract)
105-0116	HS-12	N.D.

Detection Limits: 5.0

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

SEQUOIA ANALYTICAL

M. A. Springer
 Marie McBimney Springer
 Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P4025
Sample Descript: Soil, HS-1, O5-1
Lab Number: 105-0108

Sampled: May 1, 1991
Received: May 1, 1991
Extracted: May 13, 1991
Reported: May 16, 1991

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.0050	-	500	0.25	-
Arsenic	5.0	0.0050	-	500	0.25	-
Barium	100	0.10	-	10,000	5.0	-
Beryllium	0.75	0.010	-	75	0.50	-
Cadmium	1.0	0.010	-	100	0.50	-
Chromium (VI)	5	0.0050	-	500	0.050	-
Chromium (III)	560	0.0050	-	2,500	0.25	-
Cobalt	80	0.050	-	8,000	2.5	-
Copper	25	0.010	-	2,500	0.50	-
Lead	5.0	0.0050	4.5	1,000	0.25	1,700
Mercury	0.2	0.00020	-	20	0.010	-
Molybdenum	350	0.050	-	3,500	2.5	-
Nickel	20	0.050	-	2,000	2.5	-
Selenium	1.0	0.0050	-	100	0.25	-
Silver	5	0.010	-	500	0.50	-
Thallium	7.0	0.0050	-	700	0.25	-
Vanadium	24	0.050	-	2,400	2.5	-
Zinc	250	0.010	-	5,000	0.50	-
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTL results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Malle McBlaney
Malle McBlaney Springs
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P4025

QC Sample Group: 1050117-9

Reported: May 18, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	pH	Lead	STLC- Lead
Method:	EPA 9045	EPA 7421	EPA 239.2
Analyst:	A. Pannu	V. Patel	V. Patel
Reporting Units:	N.A.	mg/kg	mg/L
Date Analyzed:	May 2, 1991	May 14, 1991	May 15, 1991
QC Sample #:	104-0145	105-0156	105-0110
Sample Conc.:	13	27	1.2
Spike Conc. Added:	N.A.	50	10
Conc. Matrix Spike:	N.A.	72	10
Matrix Spike % Recovery:	N.A.	90	88
Conc. Matrix Spike Dup.:	13	75	9.9
Matrix Spike Duplicate % Recovery:	N.A.	96	87
Relative % Difference:	0.0	4.1	1.0

SEQUOIA ANALYTICAL

Malle McBlirney Springer
Malle McBlirney Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

1050111.JVL <10>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94083
 (415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P4025 QC Sample Group: 1050111-9	Reported: May 16, 1991
---------------------------------------------------------------------------------------------------	------------------------------------------------------------	------------------------

QUALITY CONTROL DATA REPORT

ANALYTE	Total Oil & Grease
---------	--------------------

Method: SM 5520 E & F
 Analyst: L. Lalkhtman
 Reporting Units: mg
 Date Analyzed: May 2, 1991
 QC Sample #: BLK 5/2/91

Sample Conc.: N.D.

Spike Conc. Added: 100

Conc. Matrix Spike: 97

Matrix Spike % Recovery: 97

Conc. Matrix Spike Dup.: 95

Matrix Spike Duplicate % Recovery: 95

Relative % Difference: 2.1

SEQUOIA ANALYTICAL

Maria McBirney
 Maria McBirney Springer
 Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D
Sample Descript: Water
Analysis for: Total Dissolved Solids
First Sample #: 112-1278

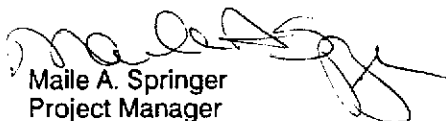
Sampled: Dec 6, 1991
Received: Dec 9, 1991
Analyzed: Dec 12, 1991
Reported: Dec 23, 1991

LABORATORY ANALYSIS FOR: Total Dissolved Solids

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
112-1278	AF-1	1.0	45,000
112-1279	AF-2	1.0	23,000
112-1280	AF-3	1.0	33,000
112-1281	AF-4	1.0	31,000
112-1282	AF-5	1.0	1,600

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

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager

DEC 24 1991



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063

(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels Sample Descript: Water, AF-5 Lab Number: 009-0797 E	Sampled: Sep 7, 1990 Received: Sep 7, 1990 Analyzed: Sep 18, 1990 Reported: Sep 26, 1990
---------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------

E.P.A. PRIORITY POLLUTANTS: METALS

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Antimony.....	500	N.D.
Arsenic.....	50	120
Beryllium.....	10	N.D.
Cadmium.....	10	N.D.
Chromium.....	5.0	770
Copper.....	10	380
Lead.....	25.0	130
Mercury.....	0.2	0.63
Nickel.....	50	980
Selenium.....	50	N.D.
Silver.....	10	N.D.
Thallium.....	500	N.D.
Zinc.....	10	820

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager

90793.JVL <10>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels

Sep 7, 1990

QC Sample Group: 0090793-7

Reported: Sep 26, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Antimony	Beryllium	Cadmium	Chromium	Copper	Nickel	Silver
Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	B. Oliver	B. Oliver	B. Oliver	B. Oliver	B. Oliver	B. Oliver	B. Oliver
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990
QC Sample #:	009-0886	009-0886	009-0886	009-0886	009-0886	009-0886	009-0886
Sample Conc.:	N.D.	N.D.	N.D.	0.042	0.046	0.13	N.D.
Spike Conc. Added:	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Conc. Matrix Spike:	1.1	0.85	0.89	0.98	1.1	0.96	0.89
Matrix Spike % Recovery:	110	85	89	94	100	83	89
Conc. Matrix Spike Dup.:	1.1	0.97	0.84	0.85	1.0	0.97	0.92
Matrix Spike Duplicate % Recovery:	110	97	84	81	98	84	92
Relative % Difference:	0	14	5.8	14	9.5	1.0	3.3

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels

Sep 7, 1990

QC Sample Group: 0090793-7

Reported: Sep 26, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Thallium	Zinc	Arsenic	Selenium	Mercury	Lead
Method:	EPA 6010	EPA 6010	EPA 206.2	EPA 206.2	EPA 245.1	EPA 7421
Analyst:	B. Oliver	B. Oliver	S. Foster	S. Foster	R. Eastman	R. Britton
Reporting Units:	mg/L	mg/L	µg/L	µg/L	mg/L	mg/L
Date Analyzed:	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 11, 1990	Sep 14, 1990	Sep 18, 1990
QC Sample #:	009-0886	009-0886	009-0315	009-0315	009-1457	009-0610
Sample Conc.:	N.D.	N.D.	6.0	N.D.	N.D.	N.D.
Spike Conc. Added:	1.0	1.0	50	50	0.0020	0.10
Conc. Matrix Spike:	0.89	0.99	46	46	0.0020	0.094
Matrix Spike % Recovery:	89	99	80	92	97	94
Conc. Matrix Spike Dup.:	0.89	1.0	46	47	0.0019	0.097
Matrix Spike Duplicate % Recovery:	89	100	80	94	94	97
Relative % Difference:	0	1.0	0	2.2	3.7	3.1

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water
Analysis for: Cyanide
First Sample #: 009-0793 F

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 22, 1990
Reported: Sep 26, 1990

LABORATORY ANALYSIS FOR: Cyanide

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
0090793 F	AF-1	0.10	N.D.
0090794 F	AF-2	0.10	N.D.
0090795 F	AF-3	0.10	N.D.
0090796 F	AF-4	0.10	N.D.
0090797 F	AF-5	0.10	N.D.

J. V. LOWNEY ASSOC.

OCT 2 1990

RECEIVED

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

90793.JVL <1>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Peter Leffler	Client Project ID: P3723, Two Hayward Parcels	Sep 7, 1990
	QC Sample Group: 0090793-7	Reported: Sep 26, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Cyanide
----------------	---------

Method: EPA 335.3
 Analyst: A. Singh
 Reporting Units: mg/L
 Date Analyzed: Sep 22, 1990
 QC Sample #: 009-0640

Sample Conc.: N.D.

Spike Conc. Added: 0.38

Conc. Matrix Spike: 0.38

Matrix Spike % Recovery: 100

Conc. Matrix Spike Dup.: 0.36

Matrix Spike Duplicate % Recovery: 94

Relative % Difference: 6.0

SEQUOIA ANALYTICAL

Malle A. McBirney
 Malle A. McBirney
 Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Sample Descript: Water
Analysis Method: Polarized Light Microscopy
First Sample #: 009-0793 D

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Analyzed: Sep 14, 1990
Reported: Sep 26, 1990

ASBESTOS ANALYSIS

Sample Number	Sample Description	Detection Limit fibers/L	Sample Result fibers/L	Asbestos Type (if present)
0090793 D	AF-1	1.0	N.D.	-
0090794 D	AF-2	1.0	N.D.	-
0090795 D	AF-3	1.0	N.D.	-
0090796 D	AF-4	1.0	N.D.	-
0090797 D	AF-5	1.0	N.D.	-

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

90793.JVL <3>



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels
Matrix Descript: Water
Analysis Method: SM 503 A&E (Gravimetric)
First Sample #: 009-0793 G

Sampled: Sep 7, 1990
Received: Sep 7, 1990
Extracted: Sep 10, 1990
Analyzed: Sep 11, 1990
Reported: Sep 26, 1990

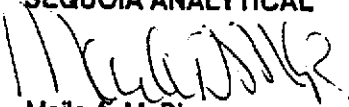
TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
0090793 G	AF-1	N.D.
0090794 G	AF-2	6.0
0090795 G	AF-3	15
0090796 G	AF-4	N.D.
0090797 G	AF-5	N.D.

Detection Limits: 5.0

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

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Maile A. McBirney
Project Manager

90793.JVL <4>



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Peter Leffler

Client Project ID: P3723, Two Hayward Parcels

Sep 7, 1990

QC Sample Group: 9989683-7

Reported: Sep 26, 1990

QUALITY CONTROL DATA REPORT

ANALYTE Total Recoverable
Petroleum Oil

Method: SM503 A&E
Analyst: L Laikhtman
Reporting Units: mg/L
Date Analyzed: Sep 11, 1990
QC Sample #: BLK 9/10/90

Sample Conc.: N.D.

Spike Conc.
Added: 100

Conc. Matrix
Spike: 98

Matrix Spike
% Recovery: 98

Conc. Matrix
Spike Dup.: 97

Matrix Spike
Duplicate
% Recovery: 97

Relative
% Difference: 1.0

SEQUOIA ANALYTICAL

M. A. McBirney
Maile A. McBirney
Project Manager

% Recovery: $\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-0584

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 9, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-0584	SS-1 @ 0'-0.5'	390
010-0585	SS-1 @ 0.5'-1'	180
010-0586	SS-1 @ 1'-1.5'	N.D.
010-0587	SS-2 @ 0'-0.5'	2,700
010-0588	SS-2 @ 0.5'-1'	3,400
010-0589	SS-2 @ 1'-1.5'	5,200
010-0590	SS-3 @ 0'-0.5'	N.D.
010-0591	SS-3 @ 0.5'-1'	380
010-0592	SS-3 @ 1'-1.5'	460
010-0593	SS-4 @ 0'-0.5'	210

J. V. LOWNEY ASSOC.

OCT 12 1990

RED

Detection Limits:

30

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

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-0594

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 9, 1990

TOTAL RECOVERABLE PETROLEUM OIL

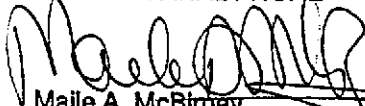
Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-0594	SS-4 @ 0.5'-1'	90
010-0595	SS-4 @ 1'-1.5'	N.D.
010-0596	SS-5 @ 0'-0.5'	120
010-0597	SS-5 @ 0.5'-1'	N.D.
010-0598	SS-5 @ 1'-1.5'	N.D.
010-0599	SS-6 @ 0'-0.5'	260
010-0600	SS-6 @ 0.5'-1'	40
010-0601	SS-6 @ 1'-1.5'	N.D.
010-0602	SS-7 @ 0'-0.5'	340
010-0603	SS-7 @ 0.5'-1'	N.D.

Detection Limits:

30

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

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Maile A. McBimney
Project Manager



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J.V. Lowney & Associates
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Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-0604

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 9, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-0604	SS-7 @ 1'-1.5'	N.D.
010-0605	SS-8 @ 0'-0.5'	2,600
010-0606	SS-8 @ 0.5'-1'	250
010-0607	SS-8 @ 1'-1.5'	N.D.
010-0608	SS-9 @ 0'-0.5'	1,700
010-0609	SS-9 @ 0.5'-1'	980
010-0610	SS-9 @ 1'-1.5'	360
010-0611	SS-10 @ 0'-0.5'	1,300
010-0612	SS-10 @ 0.5'-1'	N.D.
010-0613	SS-10 @ 1'-1.5'	N.D.

Detection Limits:

30

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

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Malle A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-0624

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 9, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-0624	SS-14 @ 0.5-1'	N.D.
010-0625	SS-14 @ 1'-1.5'	N.D.
010-0626	SS-15 @ 0'-0.5'	N.D.
010-0627	SS-15 @ 0.5-1'	N.D.
010-0629	SS-15 @ 1'-1.5'	N.D.

Detection Limits:

30

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

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Maile A. McBimey
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Ron Helm	Client Project ID: #718-9A, 2 Hayward Parcels Matrix Descript: Soil Analysis Method: SM 503 D&E (Gravimetric) First Sample #: 001-0614	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 4, 1990 Analyzed: Oct 4, 1990 Reported: Oct 9, 1990
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TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
001-0614	SS-11 @ 0'-0.5'	N.D.
001-0615	SS-11 @ 0.5'-1'	N.D.
001-0616	SS-11 @ 1'-1.5'	N.D.
001-0617	SS-12 @ 0'-0.5'	620
001-0618	SS-12 @ 0.5'-1'	250
001-0619	SS-12 @ 1'-1.5'	N.D.
001-0620	SS-13 @ 0'-0.5'	4,000
001-0621	SS-13 @ 0.5'-1'	260
001-0622	SS-13 @ 1'-1.5'	N.D.
001-0623	SS-14 @ 0'-0.5'	67

Detection Limits: 30

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

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates

145 Addison Avenue

Palo Alto, CA 94301

Attention: Ron Helm

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group: 010-0584

-100628

Reported: Oct 9, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Total Oil & Grease	Total Oil & Grease	Total Oil & Grease
Method:	SM503D&E	SM503D&E	SM503D&E
Analyst:	LL	LL	LL
Reporting Units:	mg/kg	mg/kg	mg/kg
Date Analyzed:	Oct 4, 1990	Oct 5, 1990	Oct 4, 1990
QC Sample #:	BLK10490	010-0602	BLK10490
Sample Conc.:	N.D.	340	N.D.
Spike Conc. Added:	5,000	5,600	5,600
Conc. Matrix Spike:	4,400	4,200	5,000
Matrix Spike % Recovery:	88	69	89
Conc. Matrix Spike Dup.:	4,000	4,000	5,200
Matrix Spike Duplicate % Recovery:	80	65	93
Relative % Difference:	9.5	5.4	3.9

SEQUOIA ANALYTICAL


 Maile A. McBirney
 Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: 2 Hayward Parcels
Matrix Descript: Soil, 718-9A
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-1617

Sampled: Oct 3, 1990
Received: Oct 11, 1990
Extracted: Oct 15, 1990
Analyzed: Oct 15, 1990
Reported: Oct 16, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-1617	SS-2@1.5'-2'	100
010-1618	SS-2@2'-2.5'	N.D.
010-1619	SS-2@2.5'-3'	N.D.
010-1620	SS-2@3'-3.5'	N.D.
010-1621	SS-2@3.5'-4'	190
010-1622	SS-3@1.5'-2'	N.D.
010-1623	SS-3@2'-2.5'	49
010-1624	SS-3@2.5'-3'	300
010-1625	SS-9@1.5'-2'	N.D.
010-1626	SS-9@2'-2.5'	N.D.

J. V. LOWNEY ASSOC.

OCT 18 1990

RECEIVED

Detection Limits: 30.0

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

101617.JVL <1>



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: 2 Hayward Parcels
Matrix Descript: Soil, 718-9A
Analysis Method: SM 503 D&E (Gravimetric)
First Sample #: 010-1627

Sampled: Oct 3, 1990
Received: Oct 11, 1990
Extracted: Oct 15, 1990
Analyzed: Oct 15, 1990
Reported: Oct 16, 1990

TOTAL RECOVERABLE PETROLEUM OIL

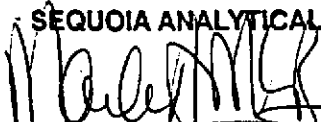
Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-1627	SS-9@2.5'-3'	N.D.
010-1628	SS-9@3'-3.5'	N.D.
010-1629	SS-9@3.5'-4'	N.D.

Detection Limits:

30.0

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: 2 Hayward Parcels
718-9A

QC Sample Group: 101617-29

Reported: Oct 16, 1990

QUALITY CONTROL DATA REPORT

ANALYTE

Total Oil & Grease

Method:	503 D&E
Analyst:	LL, S.G.
Reporting Units:	mg/kg
Date Analyzed:	Oct 15, 1990
QC Sample #:	010-1621

Sample Conc.: 190

Spike Conc. Added: 6000

Conc. Matrix Spike: 5500

Matrix Spike % Recovery: 89

Conc. Matrix Spike Dup.: 5800

Matrix Spike Duplicate % Recovery: 94

Relative % Difference: 5.3

SEQUOIA ANALYTICAL

Maire A. McBirney
Maire A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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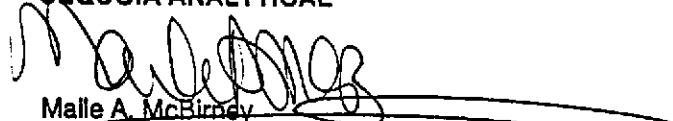
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5 Analysis Method: EPA 8240 Lab Number: 010-0585 100588, 100591 & 10059	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Analyzed: Oct 17, 1990 Reported: Oct 22, 1990
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acetone.....	500	N.D.
Benzene.....	100	N.D.
Bromodichloromethane.....	100	N.D.
Bromoform.....	100	N.D.
Bromomethane.....	100	N.D.
2-Butanone.....	500	N.D.
Carbon disulfide.....	100	N.D.
Carbon tetrachloride.....	100	N.D.
Chlorobenzene.....	100	N.D.
Chloroethane.....	100	N.D.
2-Chloroethyl vinyl ether.....	500	N.D.
Chloroform.....	100	N.D.
Chloromethane.....	100	N.D.
Dibromochloromethane.....	100	N.D.
1,1-Dichloroethane.....	100	N.D.
1,2-Dichloroethane.....	100	N.D.
1,1-Dichloroethene.....	100	N.D.
Total 1,2-Dichloroethene.....	100	N.D.
1,2-Dichloropropane.....	100	N.D.
cis 1,3-Dichloropropene.....	100	N.D.
trans 1,3-Dichloropropene.....	100	N.D.
Ethylbenzene.....	100	N.D.
2-Hexanone.....	500	N.D.
Methylene chloride.....	100	N.D.
4-Methyl-2-pentanone.....	500	N.D.
Styrene.....	100	N.D.
1,1,2,2-Tetrachloroethane.....	100	N.D.
Tetrachloroethene.....	100	N.D.
Toluene.....	100	N.D.
1,1,1-Trichloroethane.....	100	N.D.
1,1,2-Trichloroethane.....	100	N.D.
Trichloroethene.....	100	N.D.
Trichlorofluoromethane.....	100	N.D.
Vinyl acetate.....	100	N.D.
Vinyl chloride.....	100	N.D.
Total Xylenes.....	100	N.D.

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

SEQUOIA ANALYTICAL


Malle A. McBirney
Project Manager



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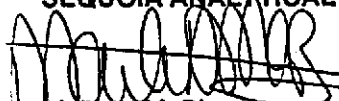
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 010-0585 100588, 100591 & 10059	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Reported: Oct 22, 1990
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VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
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No additional peaks > 250 $\mu\text{g}/\text{kg}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Marie A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8240 Lab Number: 001-0600 100603, 100606 & 10061	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Analyzed: Oct 17, 1990 Reported: Oct 22, 1990
---------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acetone.....	500	N.D.
Benzene.....	100	N.D.
Bromodichloromethane.....	100	N.D.
Bromoform.....	100	N.D.
Bromomethane.....	100	N.D.
2-Butanone.....	500	N.D.
Carbon disulfide.....	100	N.D.
Carbon tetrachloride.....	100	N.D.
Chlorobenzene.....	100	N.D.
Chloroethane.....	100	N.D.
2-Chloroethyl vinyl ether.....	500	N.D.
Chloroform.....	100	N.D.
Chloromethane.....	100	N.D.
Dibromochloromethane.....	100	N.D.
1,1-Dichloroethane.....	100	N.D.
1,2-Dichloroethane.....	100	N.D.
1,1-Dichloroethene.....	100	N.D.
Total 1,2-Dichloroethene.....	100	N.D.
1,2-Dichloropropane.....	100	N.D.
cis 1,3-Dichloropropene.....	100	N.D.
trans 1,3-Dichloropropene.....	100	N.D.
Ethylbenzene.....	100	N.D.
2-Hexanone.....	500	N.D.
Methylene chloride.....	100	N.D.
4-Methyl-2-pentanone.....	500	N.D.
Styrene.....	100	N.D.
1,1,2,2-Tetrachloroethane.....	100	N.D.
Tetrachloroethene.....	100	N.D.
Toluene.....	100	N.D.
1,1,1-Trichloroethane.....	100	N.D.
1,1,2-Trichloroethane.....	100	N.D.
Trichloroethene.....	100	N.D.
Trichlorofluoromethane.....	100	N.D.
Vinyl acetate.....	100	N.D.
Vinyl chloride.....	100	N.D.
Total Xylenes.....	100	N.D.

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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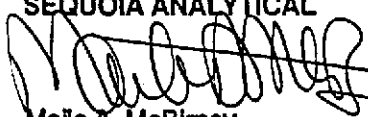
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8240 & "Open Scan" Lab Number: 001-0600 100603, 100606 & 10061	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Reported: Oct 22, 1990
---------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------

VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
---------	--------------------------------------------	-------------------------------------------

No additional peaks > 250 $\mu\text{g}/\text{kg}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

100585.JVL <6>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

J.V. Lowney & Associates	Client Project ID: #718-9A, 2 Hayward Parcels	Sampled: Oct 3, 1990
145 Addison Avenue	Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5	Received: Oct 3, 1990
Palo Alto, CA 94301	Analysis Method: EPA 8270	Extracted: Oct 11, 1990
Attention: Stason Foster	Lab Number: 010-0585 100588, 100591 & 10059	Analyzed: Oct 16, 1990
	QC Sample #:	Reported: Oct 22, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene.....	500	N.D.
Acenaphthylene.....	500	N.D.
Aniline.....	500	N.D.
Anthracene.....	500	N.D.
Benzidine.....	13,000	N.D.
Benzoic Acid.....	2,500	N.D.
Benzo(a)anthracene.....	500	N.D.
Benzo(b)fluoranthene.....	500	N.D.
Benzo(k)fluoranthene.....	500	N.D.
Benzo(g,h,i)perylene.....	500	N.D.
Benzo(a)pyrene.....	500	N.D.
Benzyl alcohol.....	500	N.D.
Bis(2-chloroethoxy)methane.....	500	N.D.
Bis(2-chloroethyl)ether.....	500	N.D.
Bis(2-chloroisopropyl)ether.....	500	N.D.
Bis(2-ethylhexyl)phthalate.....	2,500	N.D.
4-Bromophenyl phenyl ether.....	500	N.D.
Butyl benzyl phthalate.....	500	N.D.
4-Chloroaniline.....	500	N.D.
2-Chloronaphthalene.....	500	N.D.
4-Chloro-3-methylphenol.....	500	N.D.
2-Chlorophenol.....	500	N.D.
4-Chlorophenyl phenyl ether.....	500	N.D.
Chrysene.....	500	N.D.
Dibenz(a,h)anthracene.....	500	N.D.
Dibenzofuran.....	500	N.D.
Di-N-butyl phthalate.....	2,500	N.D.
1,3-Dichlorobenzene.....	500	N.D.
1,4-Dichlorobenzene.....	500	N.D.
1,2-Dichlorobenzene.....	500	N.D.
3,3-Dichlorobenzidine.....	2,500	N.D.
2,4-Dichlorophenol.....	500	N.D.
Diethyl phthalate.....	500	N.D.
2,4-Dimethylphenol.....	500	N.D.
Dimethyl phthalate.....	500	N.D.
4,6-Dinitro-2-methylphenol.....	2,500	N.D.
2,4-Dinitrophenol.....	2,500	N.D.



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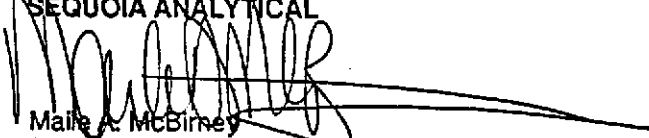
J.V. Lowney & Associates	Client Project ID: #718-9A, 2 Hayward Parcels	Sampled: Oct 3, 1990
145 Addison Avenue	Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5	Received: Oct 3, 1990
Palo Alto, CA 94301	Analysis Method: EPA 8270	Extracted: Oct 11, 1990
Attention: Stason Foster	Lab Number: 010-0585 100588, 100591 & 10059	Analyzed: Oct 16, 1990
	QC Sample #:	Reported: Oct 22, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene.....	500	N.D.
2,6-Dinitrotoluene.....	500	N.D.
Di-N-octyl phthalate.....	500	N.D.
Fluoranthene.....	500	N.D.
Fluorene.....	500	N.D.
Hexachlorobenzene.....	500	N.D.
Hexachlorobutadiene.....	500	N.D.
Hexachlorocyclopentadiene.....	500	N.D.
Hexachloroethane.....	500	N.D.
Indeno(1,2,3-cd)pyrene.....	500	N.D.
Isophorone.....	500	N.D.
2-Methylnaphthalene.....	500	N.D.
2-Methylphenol.....	500	N.D.
4-Methylphenol.....	500	N.D.
Naphthalene.....	500	N.D.
2-Nitroaniline.....	2,500	N.D.
3-Nitroaniline.....	2,500	N.D.
4-Nitroaniline.....	2,500	N.D.
Nitrobenzene.....	500	N.D.
2-Nitrophenol.....	500	N.D.
4-Nitrophenol.....	2,500	N.D.
N-Nitrosodiphenylamine.....	500	N.D.
N-Nitroso-di-N-propylamine.....	500	N.D.
Pentachlorophenol.....	2,500	N.D.
Phenanthrene.....	500	N.D.
Phenol.....	500	N.D.
Pyrene.....	500	N.D.
1,2,4-Trichlorobenzene.....	500	N.D.
2,4,5-Trichlorophenol.....	2,500	N.D.
2,4,6-Trichlorophenol.....	500	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5
Analysis Method: EPA 8270 & "Open Scan"
Lab Number: 010-0585 100588, 100591 & 10059

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Reported: Oct 22, 1990

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
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No additional peaks > 1250 $\mu\text{g}/\text{kg}$ were identified by the Mass Spectral Library.

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Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8270 Lab Number: 001-0600 100603, 100606 & 10061 QC Sample #:	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 11, 1990 Analyzed: Oct 16, 1990 Reported: Oct 22, 1990
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene.....	100	N.D.
Acenaphthylene.....	100	N.D.
Aniline.....	100	N.D.
Anthracene.....	100	N.D.
Benzidine.....	2,500	N.D.
Benzoic Acid.....	500	N.D.
Benzo(a)anthracene.....	100	N.D.
Benzo(b)fluoranthene.....	100	N.D.
Benzo(k)fluoranthene.....	100	N.D.
Benzo(g,h,i)perylene.....	100	N.D.
Benzo(a)pyrene.....	100	N.D.
Benzyl alcohol.....	100	N.D.
Bis(2-chloroethoxy)methane.....	100	N.D.
Bis(2-chloroethyl)ether.....	100	N.D.
Bis(2-chloroisopropyl)ether.....	100	N.D.
Bis(2-ethylhexyl)phthalate.....	500	N.D.
4-Bromophenyl phenyl ether.....	100	N.D.
Butyl benzyl phthalate.....	100	N.D.
4-Chloroaniline.....	100	N.D.
2-Chloronaphthalene.....	100	N.D.
4-Chloro-3-methylphenol.....	100	N.D.
2-Chlorophenol.....	100	N.D.
4-Chlorophenyl phenyl ether.....	100	N.D.
Chrysene.....	100	N.D.
Dibenz(a,h)anthracene.....	100	N.D.
Dibenzofuran.....	100	N.D.
Di-N-butyl phthalate.....	500	N.D.
1,3-Dichlorobenzene.....	100	N.D.
1,4-Dichlorobenzene.....	100	N.D.
1,2-Dichlorobenzene.....	100	N.D.
3,3-Dichlorobenzidine.....	500	N.D.
2,4-Dichlorophenol.....	100	N.D.
Diethyl phthalate.....	100	N.D.
2,4-Dimethylphenol.....	100	N.D.
Dimethyl phthalate.....	100	N.D.
4,6-Dinitro-2-methylphenol.....	500	N.D.
2,4-Dinitrophenol.....	500	N.D.



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J.V. Lowney & Associates	Client Project ID: #718-9A, 2 Hayward Parcels	Sampled: Oct 3, 1990
145 Addison Avenue	Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11	Received: Oct 3, 1990
Palo Alto, CA 94301	Analysis Method: EPA 8270	Extracted: Oct 11, 1990
Attention: Stason Foster	Lab Number: 010-0600 100603, 100606 & 10061	Analyzed: Oct 16, 1990
	QC Sample #:	Reported: Oct 22, 1990

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene.....	100	N.D.
2,6-Dinitrotoluene.....	100	N.D.
Di-N-octyl phthalate.....	100	N.D.
Fluoranthene.....	100	N.D.
Fluorene.....	100	N.D.
Hexachlorobenzene.....	100	N.D.
Hexachlorobutadiene.....	100	N.D.
Hexachlorocyclopentadiene.....	100	N.D.
Hexachloroethane.....	100	N.D.
Indeno(1,2,3-cd)pyrene.....	100	N.D.
Isophorone.....	100	N.D.
2-Methylnaphthalene.....	100	N.D.
2-Methylphenol.....	100	N.D.
4-Methylphenol.....	100	N.D.
Naphthalene.....	100	N.D.
2-Nitroaniline.....	500	N.D.
3-Nitroaniline.....	500	N.D.
4-Nitroaniline.....	500	N.D.
Nitrobenzene.....	100	N.D.
2-Nitrophenol.....	100	N.D.
4-Nitrophenol.....	500	N.D.
N-Nitrosodiphenylamine.....	100	N.D.
N-Nitroso-di-N-propylamine.....	100	N.D.
Pentachlorophenol.....	500	N.D.
Phenanthrene.....	100	N.D.
Phenol.....	100	N.D.
Pyrene.....	100	N.D.
1,2,4-Trichlorobenzene.....	100	N.D.
2,4,5-Trichlorophenol.....	500	N.D.
2,4,6-Trichlorophenol.....	100	N.D.

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

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8270 & "Open Scan" Lab Number: 010-0600 100603, 100606 & 10061	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Reported: Oct 22, 1990
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SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
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No additional peaks > 250 $\mu\text{g}/\text{kg}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.



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Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5
Lab Number: 010-0585 100585, 100588 & 10059

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 12, 1990
Reported: Oct 22, 1990

E.P.A. PRIORITY POLLUTANTS: METALS

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.0050	N.D.	500	0.25	N.D.
Arsenic	5	0.0050	0.095	500	0.25	7.5
Beryllium	0.75	0.010	N.D.	75	0.50	N.D.
Cadmium	1	0.010	N.D.	100	0.50	4.6
Chromium (III)	560	0.0050	0.8	2,500	0.25	290
Copper	25	0.010	1.3	2,500	0.50	380
Lead	5	0.0050	7.2	1,000	0.25	300
Mercury	0.2	0.00020	N.D.	20	0.010	0.089
Nickel	20	0.050	0.4	2,000	2.5	76
Selenium	1	0.0050	N.D.	100	0.25	0.37
Silver	5	0.010	N.D.	500	0.50	N.D.
Thallium	7	0.0050	N.D.	700	0.25	N.D.
Zinc	250	0.010	39	5,000	0.50	1,100

TTL results are reported as mg/kg of wet weight.
Analytes reported as N.D. were not present above the stated limit of detection.

J. V. LOWNEY ASSOC.
OCT 26 1990
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Maile A. McBirney
Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Lab Number: 010-0600 100603, 100606 & 10061	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 12, 1990 Reported: Oct 22, 1990
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E.P.A. PRIORITY POLLUTANTS: METALS

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.0050	N.D.	500	0.25	N.D.
Arsenic	5	0.0050	0.049	500	0.25	7.8
Beryllium	0.75	0.010	N.D.	75	0.50	N.D.
Cadmium	1	0.010	N.D.	100	0.50	2.7
Chromium (III)	560	0.0050	0.084	2,500	0.25	110
Copper	25	0.010	0.55	2,500	0.50	43
Lead	5	0.0050	0.39	1,000	0.25	46
Mercury	0.2	0.00020	N.D.	20	0.010	0.062
Nickel	20	0.050	0.39	2,000	2.5	73
Selenium	1	0.0050	N.D.	100	0.25	N.D.
Silver	5	0.010	N.D.	500	0.50	N.D.
Thallium	7	0.0050	N.D.	700	0.25	N.D.
Zinc	250	0.010	4.2	5,000	0.50	170

TTL results are reported as mg/kg of wet weight.

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

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Sample Descript: Soil Composite of SS-1, SS-2, SS-3, SS-5
Analysis Method: EPA 8080
Lab Number: 010-0585 100588, 100591 & 10059

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 12, 1990
Analyzed: Oct 15, 1990
Reported: Oct 22, 1990

ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Aldrin.....	5.0	N.D.
alpha-BHC.....	5.0	N.D.
beta-BHC.....	5.0	N.D.
delta-BHC.....	10	N.D.
gamma-BHC (Lindane).....	5.0	N.D.
Chlordane.....	50	N.D.
4,4'-DDD.....	10	N.D.
4,4'-DDE.....	5.0	N.D.
4,4'-DDT.....	10	N.D.
Dieldrin.....	5.0	N.D.
Endosulfan I.....	10	N.D.
Endosulfan II.....	5.0	N.D.
Endosulfan sulfate.....	50	N.D.
Endrin.....	10	N.D.
Endrin aldehyde.....	15	N.D.
Heptachlor.....	5.0	N.D.
Heptachlor epoxide.....	5.0	N.D.
Methoxychlor.....	5.0	N.D.
Toxaphene.....	100	N.D.
PCB-1016.....	50	N.D.
PCB-1221.....	50	N.D.
PCB-1232.....	50	N.D.
PCB-1242.....	50	N.D.
PCB-1248.....	50	N.D.
PCB-1254.....	50	N.D.
PCB-1260.....	50	N.D.

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

SEQUOIA ANALYTICAL

Maile A. McBirney
Maile A. McBirney
Project Manager

J.V. LOWNEY ASSOC.
OCT 29 1990
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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
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Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11
Analysis Method: EPA 8080
Lab Number: 010-0600 100603, 100606 & 10061.

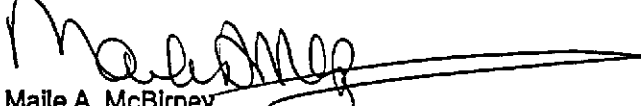
Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 12, 1990
Analyzed: Oct 15, 1990
Reported: Oct 22, 1990

ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Aldrin.....	5.0	N.D.
alpha-BHC.....	5.0	N.D.
beta-BHC.....	5.0	N.D.
delta-BHC.....	10	N.D.
gamma-BHC (Lindane).....	5.0	N.D.
Chlordane.....	50	N.D.
4,4'-DDD.....	10	N.D.
4,4'-DDE.....	5.0	N.D.
4,4'-DDT.....	10	N.D.
Dieldrin.....	5.0	N.D.
Endosulfan I.....	10	N.D.
Endosulfan II.....	5.0	N.D.
Endosulfan sulfate.....	50	N.D.
Endrin.....	10	N.D.
Endrin aldehyde.....	15	N.D.
Heptachlor.....	5.0	N.D.
Heptachlor epoxide.....	5.0	N.D.
Methoxychlor.....	5.0	N.D.
Toxaphene.....	100	N.D.
PCB-1016.....	50	N.D.
PCB-1221.....	50	N.D.
PCB-1232.....	50	N.D.
PCB-1242.....	50	N.D.
PCB-1248.....	50	N.D.
PCB-1254.....	50	N.D.
PCB-1260.....	50	N.D.

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
PCB 1016.....	250	N.D.
PCB 1221.....	250	N.D.
PCB 1232.....	250	N.D.
PCB 1242.....	250	N.D.
PCB 1248.....	250	N.D.
PCB 1254.....	250	N.D.
PCB 1260.....	250	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Malle A. McBirney
Project Manager



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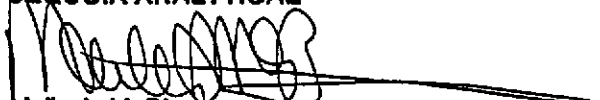
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Composite of SS-6, SS-7, SS-8, SS-11 Analysis Method: EPA 8080 Lab Number: 010-0600 100603, 100606 & 10061	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Extracted: Oct 12, 1990 Analyzed: Oct 15, 1990 Reported: Oct 22, 1990
---------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
PCB 1016.....	50	N.D.
PCB 1221.....	50	N.D.
PCB 1232.....	50	N.D.
PCB 1242.....	50	N.D.
PCB 1248.....	50	N.D.
PCB 1254.....	50	N.D.
PCB 1260.....	50	N.D.

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Analysis for: Cyanide First Sample #: 010-0585	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Reported: Oct 22, 1990
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LABORATORY ANALYSIS FOR: Cyanide

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
010-0585 010-0588 010-0591 010-0597	Soil Composite of SS-1,SS-2,SS-3,SS-5	0.50	N.D.
010-0600 010-0603 010-0606 010-0615	Soil Comp. of SS-6, SS-7,SS-8,SS-11	0.50	N.D.

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



SEQUOIA ANALYTICAL

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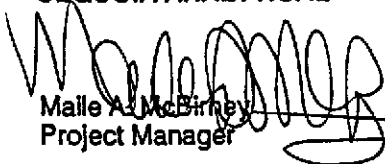
J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Sample Descript: Soil Analysis Method: Polarized Light Microscopy First Sample #: 010-0585	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Reported: Oct 22, 1990
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ASBESTOS ANALYSIS

Sample Number	Sample Description	Detection Limit fibers/g	Sample Result fibers/g	Asbestos Type (if present)
010-0585 010-0588 010-0591 010-0597	Soil Composite of SS-1,SS-2,SS-3,SS-5	1.0	N.D.	-
010-0600 010-0603 010-0606 010-0615	Soil Comp. of SS-6, SS-7,SS-8,SS-11	1	N.D.	-

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

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager



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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2 Hayward Parcels Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 010-0585	Sampled: Oct 3, 1990 Received: Oct 3, 1990 Analyzed: Oct 11, 1990 Reported: Oct 22, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
010-0585 010-0588 010-0591 010-0597	Soil Composite of SS-1,SS-2,SS-3,SS-5	N.D.	N.D.	N.D.	N.D.	N.D.
010-0600 010-0603 010-0606 010-0615	Soil Comp. of SS-6, SS-7,SS-8,SS-11	N.D.	N.D.	N.D.	N.D.	N.D.

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. McBirney
Project Manager

100585.JVL <17>



SEQUOIA ANALYTICAL

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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Matrix Descript: Soil
Analysis Method: EPA 3550/8015
First Sample #: 010-0585

Sampled: Oct 3, 1990
Received: Oct 3, 1990
Extracted: Oct 12, 1990
Analyzed: Oct 12, 1990
Reported: Oct 22, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)


Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
010-0585 010-0588 010-0591 010-0597	Soil Composite of SS-1,SS-2,SS-3,SS-5	N.D.
010-0600 010-0603 010-0606 010-0615	Soil Comp. of SS-6, SS-7,SS-8,SS-11	N.D.

Detection Limits:

1.0

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

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Maile A. McBirney
Project Manager



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Method: EPA 8270
Analyst(s): T. Fowler
QC Sample #: SBLK101090

Q.C. Sample Dates
Extracted: Oct 10, 1990
Analyzed: Oct 11, 1990
Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

Analyte	Sample Conc.	Spike Conc. Added	Conc. Matrix Spike	Matrix Spike % Recovery	Conc. Matrix Spike Duplicate	Matrix Spike Duplicate % Recovery	Relative % Difference
Phenol	N.D.	100	41	41	39	39	5.0
2-Chlorophenol	N.D.	100	82	82	76	76	7.6
1,4-Dichloro-benzene	N.D.	50	37	74	40	80	7.8
N-Nitroso-Di-N-propylamine	N.D.	50	38	76	40	80	5.1
1,2,4-Trichloro-benzene	N.D.	50	39	78	42	84	7.4
4-Chloro-3-Methylphenol	N.D.	100	93	93	86	86	7.8
Acenaphthene	N.D.	50	41	82	42	84	2.4
4-Nitrophenol	N.D.	100	49	49	49	49	0
2,4-Dinitro-toluene	N.D.	50	48	96	47	94	2.1
Pentachloro-phenol	N.D.	100	83	83	82	82	1.2
Pyrene	N.D.	50	50	100	50	100	0

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager

$$\% \text{ Recovery} = \frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$$

$$\text{Relative \% Difference} = \frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$$



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J.V. Lowney & Associates
145 Addison Avenue
Pallo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	High B.P. Hydrocarbons	Benzene	Toluene	Ethyl benzene	Xylenes	gamma-BHC	Aldrin
Method:	EPA 8015	EPA 8020/8015	8020/8015	8020/8015	8020/8015	EPA 8080	EPA 8080
Analyst:	K. Mitchell	Dinsay/Meyer	Dinsay/Meyer	Dinsay/Meyer	Dinsay/Meyer	M. Williams	M. Williams
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Oct 12, 1990	Oct 11, 1990	Oct 11, 1990	Oct 11, 1990	Oct 11, 1990	Oct 10, 1990	Oct 10, 1990
QC Sample #:	010-1157					Blank	Blank
Sample Conc.:	N.D.	0.0063	0.0065	N.D.	0.0057	N.D.	N.D.
Spike Conc. Added:	15	0.20	0.20	0.20	0.60	10	10
Conc. Matrix Spike:	14	0.22	0.19	0.21	0.63	10	9.6
Matrix Spike % Recovery:	93	110	92	110	100	100	96
Conc. Matrix Spike Dup.:	10	0.22	0.21	0.22	0.66	12	10
Matrix Spike Duplicate % Recovery:	67	110	100	110	110	120	100
Relative % Difference:	33	0	10	4.7	4.7	18	4.1

SEQUOIA ANALYTICAL

Maile A. McBirney
Maile A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
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Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Dieldrin	Cyanide	Lead STLC	Lead TTL	Arsenic STLC	Selenium STLC	Arsenic TTL
Method:	EPA 8080	EPA 335.2	EPA 7421	EPA 7421	EPA 7040	EPA 7760	EPA 7040
Analyst:	M. Williams	A. Maralit	R. Sharma	R. Sharma	S. Foster	S. Foster	S. Foster
Reporting Units:	mg/kg	mg/L	mg/L	mg/kg	mg/L	mg/kg	mg/kg
Date Analyzed:	Oct 10, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990	Oct 15, 1990
QC Sample #:	Blank	D.L Water	010-1325	010-1771	010-1137	010-1137	010-0648
Sample Conc.:	N.D.	0	N.D.	15	N.D.	N.D.	N.D.
Spike Conc. Added:	20	0.10	0.10	50	0.050	0.050	50
Conc. Matrix Spike:	20	0.089	0.10	66	0.051	0.049	35
Matrix Spike % Recovery:	100	89	100	100	100	98	70
Conc. Matrix Spike Dup.:	20	0.090	0.11	67	0.050	0.050	34
Matrix Spike Duplicate % Recovery:	100	90	110	100	100	100	68
Relative % Difference:	0	1.1	9.5	1.5	2.0	2.0	2.9

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager

$$\% \text{ Recovery} = \frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$$

$$\text{Relative \% Difference} = \frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Selenium TTLIC	Mercury STLC	Antimony STLC	Beryllium STLC	Cadmium STLC	Chromium STLC	Copper STLC
Method:	EPA 7760	EPA 245.1	EPA 7041	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	S. Foster	R. Eastman	S. Foster	B. Oliver	B. Oliver	B. Oliver	B. Oliver
Reporting Units:	mg/kg	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Oct 15, 1990	Oct 16, 1990	Oct 16, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990	Oct 12, 1990
QC Sample #:	010-0648	010-0899	010-1587	010-1212	010-1212	010-1212	010-1212
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	50	0.0020	0.020	1.0	1.0	1.0	1.0
Conc. Matrix Spike:	39	0.0017	0.017	0.90	0.93	0.83	0.85
Matrix Spike % Recovery:	78	82	85	90	93	83	85
Conc. Matrix Spike Dup.:	41	0.0020	0.018	1.0	1.0	0.94	1.1
Matrix Spike Duplicate % Recovery:	82	98	90	100	100	94	110
Relative % Difference:	5.0	16	5.7	11	7.3	10	26

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Nickel STLC	Silver STLC	Thallium STLC	Zinc STLC	Mercury STLC
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Method:	EPA 6010	EPA 6010	EPA 7841	EPA 6010	7471/245.1
Analyst:	B. Oliver	B. Oliver	S. Foster	B. Oliver	R. Eastman
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Oct 12, 1990	Oct 12, 1990	Oct 16, 1990	Oct 12, 1990	Oct 15, 1990
QC Sample #:	010-1212	010-1212	010-1587	010-1212	100600,3,6,15

Sample Conc.:	N.D.	N.D.	N.D.	0.11	0.062
Spike Conc. Added:	1.0	1.0	0.020	1.0	0.10
Conc. Matrix Spike:	0.90	0.73	0.024	0.91	0.15
Matrix Spike % Recovery:	90	73	120	80	88
Conc. Matrix Spike Dup.:	0.95	0.98	0.024	1.1	0.16
Matrix Spike Duplicate % Recovery:	95	98	120	100	100
Relative % Difference:	5.4	29	0	19	8.3

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Antimony TTLC	Beryllium TTLC	Cadmium TTLC	Chromium TTLC	Copper TTLC	Nickel TTLC	Silver TTLC
Method:	EPA 7041	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	S. Foster	R. Sharma	R. Sharma	R. Sharma	R. Sharma	R. Sharma	R. Sharma
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Oct 16, 1990	Oct 15, 1990	Oct 15, 1990	Oct 15, 1990	Oct 15, 1990	Oct 15, 1990	Oct 15, 1990
QC Sample #:	010-1587	010-1771	010-1771	010-1771	010-1771	010-1771	010-1771
Sample Conc.:	N.D.	N.D.	N.D.	24	28	N.D.	N.D.
Spike Conc. Added:	1.0	500	500	500	500	500	500
Conc. Matrix Spike:	0.66	510	480	500	440	510	370
Matrix Spike % Recovery:	66	100	96	95	83	100	74
Conc. Matrix Spike Dup.:	0.64	510	460	500	450	500	360
Matrix Spike Duplicate % Recovery:	64	100	92	95	84	100	72
Relative % Difference:	3.1	0	45	0	2.2	2.0	2.7

SEQUOIA ANALYTICAL

Maile A. McBirney
Maile A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels

QC Sample Group:

Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Thallium TTLC	Zinc TTLC
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Method:	EPA 7841	EPA 6010
Analyst:	S. Foster	R. Sharma
Reporting Units:	mg/kg	mg/kg
Date Analyzed:	Oct 16, 1990	Oct 15, 1990
QC Sample #:	010-1587	010-1771

Sample Conc.:	N.D.	40
Spike Conc. Added:	1.0	500
Conc. Matrix Spike:	0.99	450
Matrix Spike % Recovery:	99	82
Conc. Matrix Spike Dup.:	0.97	440
Matrix Spike Duplicate % Recovery:	97	80
Relative % Difference:	2.0	2.2

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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J.V. Lowney & Associates
145 Addison Avenue
Palo Alto, CA 94301
Attention: Stason Foster

Client Project ID: #718-9A, 2 Hayward Parcels
Method (units): EPA 8240 (µg/L purged)
Analyst(s): E. Manuel
QC Sample #: 009-3678

Q.C. Sample Dates

Analyzed: Oct 15, 1990
Reported: Oct 22, 1990

QUALITY CONTROL DATA REPORT

Analyte	Sample Conc.	Spike Conc. Added	Conc. Matrix Spike	Matrix Spike % Recovery	Conc. Matrix Spike Duplicate	Matrix Spike Duplicate % Recovery	Relative % Difference
1,1-Dichloroethene	N.D.	50	56	110	54	110	3.6
Trichloroethene	N.D.	50	47	94	46	92	2.2
Benzene	N.D.	50	53	110	52	100	1.9
Toluene	N.D.	50	48	96	48	96	0
Chlorobenzene	N.D.	50	51	100	51	100	0

SEQUOIA ANALYTICAL

Malle A. McBirney
Malle A. McBirney
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
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J.V. Lowney & Associates 145 Addison Avenue Palo Alto, CA 94301 Attention: Stason Foster	Client Project ID: #718-9A, 2-Hayward Parcels Matrix Descript: Water Analysis Method: EPA 3510/8015 First Sample #: 010-0873 C	Sampled: Oct 4, 1990 Received: Oct 4, 1990 Extracted: Oct 8, 1990 Analyzed: Oct 10, 1990 Reported: Oct 22, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons $\mu\text{g/L}$ (ppb)
010-0873	AF-3	N.D.
010-0874	AF-1	N.D.
010-0875	AF-2	N.D.
010-0876	AF-4	N.D.
010-0877	AF-5	62

Detection Limits:

50

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D
Sample Descript: Water, AF-1
Lab Number: 112-1278

Sampled: Dec 6, 1991
Received: Dec 9, 1991
Extracted: Dec 10, 1991
Reported: Dec 23, 1991

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)
Antimony	15	0.050	-	500	0.050	N.D.
Arsenic	5	0.010	-	500	0.0050	0.056
Barium	100	0.10	-	10,000	0.10	1.0
Beryllium	0.75	0.010	-	75	0.010	N.D.
Cadmium	1	0.010	-	100	0.010	N.D.
Chromium (VI)	5	0.0050	-	500	0.0050	0.041
Chromium (III)	560	0.010	-	2,500	0.010	0.20
Cobalt	80	0.050	-	8,000	0.050	N.D.
Copper	25	0.010	-	2,500	0.010	0.11
Lead	5	0.0050	-	1,000	0.0050	0.023
Mercury	0.2	0.00020	-	20	0.00020	N.D.
Molybdenum	350	0.050	-	3,500	0.050	0.053
Nickel	20	0.050	-	2,000	0.050	0.22
Selenium	1	0.010	-	100	0.050	N.D.
Silver	5	0.010	-	500	0.010	0.018
Thallium	7	0.50	-	700	0.050	N.D.
Vanadium	24	0.050	-	2,400	0.050	0.19
Zinc	250	0.010	-	5,000	0.010	0.29
Asbestos	-	10	-	10,000	10	-
Fluoride	180	0.10	-	18,000	0.10	-

TTL results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager

1121278.JVL <2>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D
Sample Descript: Water, AF-2
Lab Number: 112-1279

Sampled: Dec 6, 1991
Received: Dec 9, 1991
Extracted: Dec 10, 1991
Reported: Dec 23, 1991

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

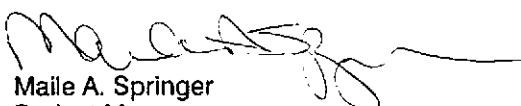
Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)
Antimony	15	0.050	-	500	0.025	N.D.
Arsenic	5	0.010	-	500	0.025	N.D.
Barium	100	0.10	-	10,000	0.10	N.D.
Beryllium	0.75	0.010	-	75	0.010	N.D.
Cadmium	1	0.010	-	100	0.010	N.D.
Chromium (VI)	5	0.0050	-	500	0.0050	N.D.
Chromium (III)	560	0.010	-	2,500	0.010	N.D.
Cobalt	80	0.050	-	8,000	0.050	N.D.
Copper	25	0.010	-	2,500	0.010	0.027
Lead	5	0.0050	-	1,000	0.0050	0.0057
Mercury	0.2	0.00020	-	20	0.00020	N.D.
Molybdenum	350	0.050	-	3,500	0.050	0.090
Nickel	20	0.050	-	2,000	0.050	N.D.
Selenium	1	0.010	-	100	0.025	N.D.
Silver	5	0.010	-	500	0.010	N.D.
Thallium	7	0.50	-	700	0.025	N.D.
Vanadium	24	0.050	-	2,400	0.050	N.D.
Zinc	250	0.010	-	5,000	0.010	0.10
Asbestos	-	10	-	10,000	10	-
Fluoride	180	0.10	-	18,000	0.10	-

TTL results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D
Sample Descript: Water, AF-3
Lab Number: 112-1280

Sampled: Dec 6, 1991
Received: Dec 9, 1991
Extracted: Dec 10, 1991
Reported: Dec 23, 1991

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)
Antimony	15	0.050	-	500	0.025	N.D.
Arsenic	5	0.010	-	500	0.025	N.D.
Barium	100	0.10	-	10,000	0.10	0.46
Beryllium	0.75	0.010	-	75	0.010	N.D.
Cadmium	1	0.010	-	100	0.010	N.D.
Chromium (VI)	5	0.0050	-	500	0.0050	0.016
Chromium (III)	560	0.010	-	2,500	0.010	0.092
Cobalt	80	0.050	-	8,000	0.050	N.D.
Copper	25	0.010	-	2,500	0.010	0.063
Lead	5	0.0050	-	1,000	0.0050	0.012
Mercury	0.2	0.00020	-	20	0.00020	N.D.
Molybdenum	350	0.050	-	3,500	0.050	0.071
Nickel	20	0.050	-	2,000	0.050	0.11
Selenium	1	0.010	-	100	0.025	N.D.
Silver	5	0.010	-	500	0.010	N.D.
Thallium	7	0.50	-	700	0.025	N.D.
Vanadium	24	0.050	-	2,400	0.050	0.096
Zinc	250	0.010	-	5,000	0.010	0.18
Asbestos	-	10	-	10,000	10	-
Fluoride	180	0.10	-	18,000	0.10	-

TTL results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D
Sample Descript: Water, AF-4
Lab Number: 112-1281

Sampled: Dec 6, 1991
Received: Dec 9, 1991
Extracted: Dec 10, 1991
Reported: Dec 23, 1991

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

Soluble Threshold Limit Concentration

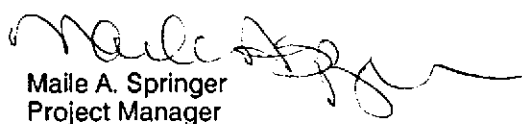
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)
Antimony	15	0.050	-	500	0.025	N.D.
Arsenic	5	0.010	-	500	0.025	N.D.
Barium	100	0.10	-	10,000	0.10	N.D.
Beryllium	0.75	0.010	-	75	0.010	N.D.
Cadmium	1	0.010	-	100	0.010	N.D.
Chromium (VI)	5	0.0050	-	500	0.0050	0.039
Chromium (III)	560	0.010	-	2,500	0.010	0.025
Cobalt	80	0.050	-	8,000	0.050	N.D.
Copper	25	0.010	-	2,500	0.010	0.023
Lead	5	0.0050	-	1,000	0.0050	0.014
Mercury	0.2	0.00020	-	20	0.00020	N.D.
Molybdenum	350	0.050	-	3,500	0.050	0.070
Nickel	20	0.050	-	2,000	0.050	N.D.
Selenium	1	0.010	-	100	0.025	N.D.
Silver	5	0.010	-	500	0.010	N.D.
Thallium	7	0.50	-	700	0.025	N.D.
Vanadium	24	0.050	-	2,400	0.050	N.D.
Zinc	250	0.010	-	5,000	0.010	0.090
Asbestos	-	10	-	10,000	10	-
Fluoride	180	0.10	-	18,000	0.10	-

TTL results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D
Sample Descript: Water, AF-5
Lab Number: 112-1282

Sampled: Dec 6, 1991
Received: Dec 9, 1991
Extracted: Dec 10, 1991
Reported: Dec 23, 1991

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTL Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)
Antimony	15	0.050	-	500	0.025	N.D.
Arsenic	5	0.010	-	500	0.0050	0.067
Barium	100	0.10	-	10,000	0.10	3.4
Beryllium	0.75	0.010	-	75	0.010	N.D.
Cadmium	1	0.010	-	100	0.010	N.D.
Chromium (VI)	5	0.0050	-	500	0.0050	N.D.
Chromium (III)	560	0.010	-	2,500	0.010	0.93
Cobalt	80	0.050	-	8,000	0.050	0.21
Copper	25	0.010	-	2,500	0.010	0.52
Lead	5	0.0050	-	1,000	0.0050	0.089
Mercury	0.2	0.00020	-	20	0.00020	N.D.
Molybdenum	350	0.050	-	3,500	0.050	N.D.
Nickel	20	0.050	-	2,000	0.050	1.4
Selenium	1	0.010	-	100	0.025	N.D.
Silver	5	0.010	-	500	0.010	N.D.
Thallium	7	0.50	-	700	0.025	N.D.
Vanadium	24	0.050	-	2,400	0.050	0.55
Zinc	250	0.010	-	5,000	0.010	1.1
Asbestos	-	10	-	10,000	10	-
Fluoride	180	0.10	-	18,000	0.10	-

TTL results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D
Matrix Descript: Water
Analysis Method: SM 5520 B&F (Gravimetric)
First Sample #: 112-1278

Sampled: Dec 6, 1991
Received: Dec 9, 1991
Extracted: Dec 10, 1991
Analyzed: Dec 11, 1991
Reported: Dec 23, 1991

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
112-1278	AF-1	N.D.
112-1279	AF-2	N.D.
112-1280	AF-3	N.D.
112-1281	AF-4	N.D.
112-1282	AF-5	N.D.

Detection Limits:

5.0

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

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager

1121278.JVL <7>



SEQUOIA ANALYTICAL

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Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D
Matrix Descript: Water
Analysis Method: EPA 3510/8015
First Sample #: 112-1283

Sampled: Dec 6, 1991
Received: Dec 9, 1991
Extracted: Dec 11, 1991
Analyzed: Dec 12, 1991
Reported: Dec 23, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

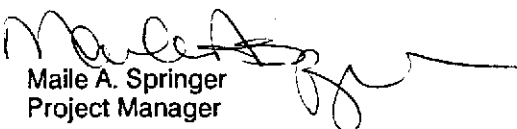
Sample Number	Sample Description	High B.P. Hydrocarbons $\mu\text{g/L}$ (ppb)
112-1283	AF-5	100

Detection Limits:

50

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager

1121278.JVL <8>



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Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D

QC Sample Group: 1121278 - 82

Reported: Dec 23, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Hexavalent Chromium	Ttl. Dissolved Solids	Lead	Mercury	Antimony	Thallium
Method:	EPA 7196	EPA 160.1	EPA 239.2	EPA 245.1	EPA 204.2	EPA 279.2
Analyst:	V.Ankaitis	J.Martinez	N.Herrera	Y.Arteaga	F.Contreras	F.Contreras
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Dec 10, 1991	Dec 12, 1991	Dec 13, 1991	Dec 16, 1991	Dec 16, 1991	Dec 16, 1991
QC Sample #:	111-2931	112-1282	111-6249	112-1278	112-0567	112-0567
Sample Conc.:	N.D.	1600	0.014	N.D.	N.D.	N.D.
Spike Conc. Added:	0.50	N.A.	0.050	0.0020	0.10	0.10
Conc. Matrix Spike:	0.43	N.A.	0.053	0.0018	0.10	0.094
Matrix Spike % Recovery:	86	N.A.	78	90	100	94
Conc. Matrix Spike Dup.:	0.42	1600	0.055	0.0016	0.10	0.092
Matrix Spike Duplicate % Recovery:	84	N.A.	82	80	100	92
Relative % Difference:	2.4	0.0	3.7	11.8	0.0	2.2

SEQUOIA ANALYTICAL

Maile A. Springer
Maile A. Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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Lowney Associates
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Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D

QC Sample Group: 1121278 - 82

Reported: Dec 23, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper
Method:	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7
Analyst:	C.Medefesser	C.Medefesser	C.Medefesser	C.Medefesser	C.Medefesser	C.Medefesser
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Dec 16, 1991	Dec 16, 1991	Dec 16, 1991	Dec 16, 1991	Dec 16, 1991	Dec 16, 1991
QC Sample #:	112-1138	112-1138	112-1138	112-1138	112-1138	112-1138
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	0.19
Spike Conc. Added:	1.0	1.0	1.0	1.0	1.0	1.0
Conc. Matrix Spike:	1.0	0.96	0.94	0.98	0.98	1.2
Matrix Spike % Recovery:	100	96	94	98	98	101
Conc. Matrix Spike Dup.:	1.0	0.97	0.95	0.99	0.97	1.2
Matrix Spike Duplicate % Recovery:	100	97	95	99	97	101
Relative % Difference:	0.0	1.0	1.1	1.0	1.0	0.0

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

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Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D

QC Sample Group: 1121278 - 82

Reported: Dec 23, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Molybdenum	Nickel	Silver	Vanadium	Zinc	Ttl. Recov. Pet.Hyd.
Method:	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	S,5520B&F
Analyst:	C.Medefesser	C.Medefesser	C.Medefesser	C.Medefesser	C.Medefesser	A.Do
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Dec 16, 1991	Dec 16, 1991	Dec 16, 1991	Dec 16, 1991	Dec 16, 1991	Dec 11, 1991
QC Sample #:	112-1138	112-1138	112-1138	112-1138	112-1138	BLK121191
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	0.18	N.D.
Spike Conc. Added:	1.0	1.0	1.0	1.0	1.0	200
Conc. Matrix Spike:	0.97	0.98	0.91	1.0	1.1	170
Matrix Spike % Recovery:	97	98	91	100	92	85
Conc. Matrix Spike Dup.:	0.98	1.0	0.92	1.0	1.1	160
Matrix Spike Duplicate % Recovery:	98	100	92	100	92	80
Relative % Difference:	1.0	2.0	1.1	0.0	0.0	6.1

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

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(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9D

QC Sample Group: 1121278 - 82

Reported: Dec 23, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel
----------------	--------

Method: EPA 8015
 Analyst: R.Lee
 Reporting Units: $\mu\text{g/L}$
 Date Analyzed: Dec 12, 1991
 QC Sample #: BLK121191-X

Sample Conc.: N.D.

Spike Conc. Added: 300

Conc. Matrix Spike: 220

Matrix Spike % Recovery: 73

Conc. Matrix Spike Dup.: 210

Matrix Spike Duplicate % Recovery: 70

Relative % Difference: 4.7

SEQUOIA ANALYTICAL

Maile A. Springer
 Maile A. Springer
 Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

**LOWNEY ASSOCIATES
CHAIN OF CUSTODY RECORD**

COPY

JOB NO. 718-9D		PROJECT NAME/LOCATION Two Hayward Parcels			NO. OF CON- TAINERS	ANALYSIS REQUIRED					SHIP TO:		
SAMPLER(S): (Signature) <i>Jason Foster</i>						<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">0.1 + 0.2248 EF</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">180CM 5520 EF</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH - METALS (TYPE 22)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TDS</div> </div>					LOWNEY ASSOCIATES 405 Clyde Avenue Mountain View, CA 94043 415-967-2365 415-967-2785 (FAX)		
DATE	TIME	SAMPLE DESCRIPTION				REMARKS							
12/6/91	1:00	AF-1	GROUND WATER		121278	X	X	X					2 WEEK TURNAROUND
	1:30	AF-2	↓		79	X	X	X					FILTER METALS SAMPLES PRIOR TO ANALYSIS
	12:00	AF-3			80	X	X	X					
	11:00	AF-4			81	X	X	X					
	2:45	AF-5			82	X	X	X	X				
Relinquished by: (Signature) <i>Jason Foster</i>		Date 12/9/91	Time 2pm	Received By: (Signature) <i>Alex Savva</i>		Relinquished by: (Signature) <i>Alex Savva</i>		Date 12/9/91	Time 3:20	Received By: (Signature) <i>A. Nagra</i>			
Laboratory of Record: SEQUOIA		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:					



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Ref

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Ron Helm

Client Project ID: 718-9D
Matrix Descript: Soil
Analysis Method: SM 5520 E&F (Gravimetric)
First Sample #: 112-4839

Sampled: Dec 26, 1991
Received: Dec 26, 1991
Extracted: Jan 6, 1992
Analyzed: Jan 6, 1992
Reported: Jan 9, 1992

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
112-4839	SS - 8A	N.D.
112-4840	SS - 8B	N.D.
112-4841	SS - 8C	N.D.
112-4842	SS - 8D	N.D.
112-4843	SS - 8E	N.D.

LOWNEY ASSOC.
JAN 13 1992
RECEIVED

Detection Limits: 30

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

SEQUOIA ANALYTICAL

Maile A. Springer
Maile A. Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Ron Helm

Client Project ID: 718-9D

QC Sample Group: 1124839-43

Reported: Jan 9, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Total Recoverable Petroleum Oil
---------	------------------------------------

Method: SM5520 E&F
 Analyst: A. Do
 Reporting Units: mg/kg
 Date Analyzed: Jan 6, 1992
 QC Sample #: BLK010692

Sample Conc.: N.D.

Spike Conc.
Added: 5000

Conc. Matrix
Spike: 4500

Matrix Spike
% Recovery: 90

Conc. Matrix
Spike Dup.: 4600

Matrix Spike
Duplicate
% Recovery: 92

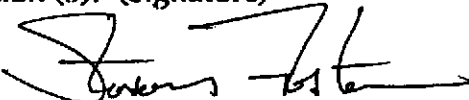
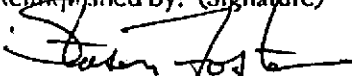
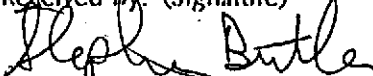

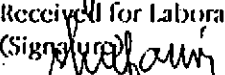
Relative
% Difference: 2.2

SEQUOIA ANALYTICAL

Maile A. Springer
 Maile A. Springer
 Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}}$	x 100
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2}$	x 100

LOWNEY ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:				
718-9D		TWO HAYWARD PARCELS			1	55% TOBACCO	BTEX						LOWNEY ASSOCIATES 405 Clyde Avenue Mountain View, CA 94043 415-967-2365 415-967-2785 (FAX)		
DATE	TIME	SAMPLE DESCRIPTION											REMARKS		
SAMPLER(S): (Signature) 															
12/26/91	1124839	SS-8A	Soil	1	X								Normal (2 WEEK) TURNAROUND		
	40	SS-8B		1	X								(RUN BTEX ON THE SAMPLE WITH HIGHEST O&G LEVEL)		
	41	SS-8C		1	X										
	42	SS-8D		1	X										
	43	SS-8E		1	X										
													After removing required amount of soil from the sampling tubes, please ship samples to Friedman & Bruya, Inc. 3008-B 16 th Avenue West Seattle, Washington 98119 206-285-8282		
													Along with the attached chain of custody - Pls call Steven Foster or Ron Helm if you have questions		
Relinquished by: (Signature) 		Date 12/27/91	Time 10:30	Received by: (Signature) 		Relinquished by: (Signature) 		Date 12-27-91	Time 1235	Received by: (Signature)					
Laboratory of Record: SEQUOIA		Date	Time	Received for Laboratory By: (Signature) 		Date 12-27	Time 1235	Remarks:							

ENVIRONMENTAL ANALYSIS REPORT

CARTER ANALYTICAL LABORATORY, INC.

590 DIVISION STREET • CAMPBELL, CA 95008 • (408) 364-3030 • FAX (408) 866-0319

ANALYSIS REPORT
FOR

Lowney Associates
405 Clyde Avenue
Mt. View, CA 94043

Revised 12-18-91
DATE: 12-13-91

CONTACT: Stason Foster

CHAIN OF CUSTODY ID NO: 718-9E

ORDER NO: 1999A-TD P.O. NO: 718-9E

SITE DESCRIPTION: Two Hayward Parcels

SAMPLE DESCRIPTION:

Solid
Sampled: 12-06-91
Received: 12-09-91
Analyzed: 12-10-91
Number of Samples: 12

REQUESTED ANALYSIS:

Methods: EPA 6010

The analyses reported are considered accurate. Should you wish further support for the reported data, submit your requirements in writing within 10 days. It is Carter Analytical Labs intent to give you complete satisfaction. Please reference the order number when communicating with us. The invoice is due and payable within 30 days from invoice date.

Hazardous Materials Certification No: 304 • Drinking Water Certification No: 953
from the
State of California • Department of Health Services

CARTER ANALYTICAL LABORATORY, INC.

590 DIVISION STREET • CAMPBELL, CA 95008 • (408) 364-3030 • FAX (408) 866-0319

<u>Sample</u>	<u>Customer Label</u>	<u>Description</u>
L1	A	slag
L2	A	slag-duplicate L1
L3	B	slag
L4	B	slag-duplicate L3
L5	C	slag
L6	C	slag-duplicate L5
L7	D	slag
L8	D	slag-duplicate L7
L9	E	slag
L10	E	slag-duplicate L9
L5	F	slag
L6	F	slag-duplicate L11

Sample Preparation

The samples were prepared according to Title 22, Section 66700 for Total Threshold Limit Concentration (TTL) procedures.

Title 22 Waste Metals Analysis for TTL levels by EPA Method 6010

<u>Metal</u>	<u>L1</u> <u>(mg/Kg)</u>	<u>L3</u> <u>(mg/Kg)</u>	<u>L5</u> <u>(mg/Kg)</u>	<u>TTL</u> <u>Regulatory</u> <u>Levels</u>	<u>Detection</u> <u>Limits</u> <u>(mg/Kg)</u>
Antimony	66.8	LDL	58.9	500	0.08
Arsenic	59.3	LDL	56.3	500	0.06
Barium	5100.	LDL	236.0	10000	0.001
Beryllium	LDL	LDL	LDL	75	0.001
Cadmium	7.06	0.88	5.4	100	0.003
Chromium	311.2	3.4	251.3	2500	0.006
Cobalt	8.43	LDL	8.71	8000	0.006
Copper	4600.	7000.	111.2	2500	0.002
Lead	361.2	LDL	252.0	1000	0.044
Mercury	13.5	LDL	11.9	20	0.024
Molybdenum	137.4	LDL	132.8	3500	0.008
Nickel	28.8	16.6	48.9	2000	0.008
Selenium	39.3	LDL	33.6	100	0.06
Silver	5.8	LDL	3.91	500	0.006
Thallium	46.7	LDL	40.8	700	0.054
Vanadium	42.5	LDL	32.9	2400	0.01
Zinc	25000.	4.3	15800.	5000	0.004

<u>Sample</u>	<u>Customer Label</u>	<u>Description</u>
L1	A	slag
L2	A	slag-duplicate L1
L3	B	slag
L4	B	slag-duplicate L3
L5	C	slag
L6	C	slag-duplicate L5
L7	D	slag
L8	D	slag-duplicate L7
L9	E	slag
L10	E	slag-duplicate L9
L11	F	slag
L12	F	slag-duplicate L11

Title 22 Waste Metals Analysis for TTLC levels by EPA Method 6010 -cont

<u>Metal</u>	<u>L7 (mg/Kg)</u>	<u>L9 (mg/Kg)</u>	<u>L11 (mg/Kg)</u>	<u>TTLC Regulatory Levels</u>	<u>Detection Limits (mg/Kg)</u>
Antimony	59.0	38.9	50.4	500	0.08
Arsenic	59.0	35.9	47.4	500	0.06
Barium	336.0	91.6	159.0	10000	0.001
Beryllium	LDL	LDL	LDL	75	0.001
Cadmium	4.8	2.4	4.5	100	0.003
Chromium	349.0	201.0	319.4	2500	0.006
Cobalt	7.4	6.1	6.9	8000	0.006
Copper	86.0	37.2	93.7	2500	0.002
Lead	269.4	48.3	324.3	1000	0.044
Mercury	12.9	1.9	10.3	20	0.024
Molybdenum	139.0	78.4	108.3	3500	0.008
Nickel	22.1	13.1	26.5	2000	0.008
Selenium	33.6	19.8	29.8	100	0.06
Silver	5.16	2.9	3.9	500	0.006
Thallium	45.1	25.9	36.1	700	0.054
Vanadium	44.5	24.7	27.3	2400	0.01
Zinc	24000.	294.0	15700.	5000	0.004

LDL indicates results are less than detection limit.

=====

CARTER ANALYTICAL LABORATORY

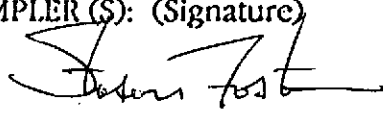
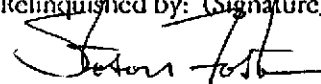
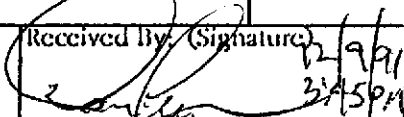
A. E. Robinson

Dr. A. Edward Robinson
 Laboratory Manager

J. L. Carter

J. L. Carter
 QA/QC Manager

LOWNEY ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO. 718-9E		PROJECT NAME/LOCATION TWO HAYWARD PARCELS		NO. OF CON- TAINERS	ANALYSIS REQUIRED						SHIP TO:	
SAMPLER(S): (Signature) 					17 CAN METALS (DIFF 25)						LOWNEY ASSOCIATES 405 Clyde Avenue Mountain View, CA 94043 415-967-2365 415-967-2785 (FAX)	
DATE	TIME	SAMPLE DESCRIPTION									REMARKS	
12/6/91		A	SLAG	2	X						2-DAY TURNAROUND	
		B		2	X						(SAVE ALL UNUSED PORTIONS FOR POSSIBLE FUTURE ANALYSES)	
		C		2	X							
		D		2	X							
		E		2	X							
		F		2	X							
Relinquished by: (Signature) 		Date 12/9/91	Time	Received By: (Signature) 	Date 12/9/91	Time 3:45 PM	Relinquished by: (Signature)		Date	Time	Received By: (Signature)	
Laboratory of Record: CARTER LABS		Date	Time	Received for Laboratory By: (Signature)	Date	Time	Remarks:					

CARTER ANALYTICAL LABORATORY, INC.

SP

590 DIVISION STREET • CAMPBELL, CA 95008 • (408) 364-3030 • FAX (408) 866-0319

REPORT FOR Mr. Staston Foster ORDER NO. 12074-TD PO# 7189E
Lowney Associates DATE 01-08-92
SUBJECT Analysis of Solid

Solid was analyzed for chromium VI by ultra violet/visible (UV/VIS). The sample was identified as follows.

<u>Sample</u>	<u>Customer Label</u>	<u>Description</u>
L1	Sample D	slag

Chromium VI Analysis


A known mass of sample was shaken with deionized water, in the ratio 4g sample to 40 mL water, for 48 hours. The extract was analyzed using method EPA 7196, Sections 7.1 and 7.2, for chromium VI by complexation with diphenyl carbazide at pH 2. The color of the resulting solution was compared against a calibration curve obtained at 540 nm using a Beckman UV/VIS spectrometer. The result, reported as mg/L in the extract, is as follows.

<u>Anion</u>	<u>L1</u>
Chromium VI	< 0.5

Samples not collected within a two week period of time following the completion of analyses will be discarded unless otherwise specified.

If you would like to discuss the contents of the report, please contact your Technical Sales Representative.

REPORT APPROVED BY


S. L. Carter

TITLE

QAQC Manager

Dr. A. Edward Robinson

TITLE

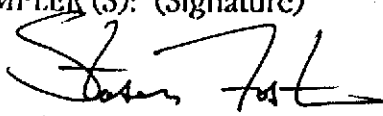
Laboratory Manager

LOWNEY ASSOC
JAN 10 1992

This report completes this order. If you are not completely satisfied with the results stated in this report, or the charges for services rendered, submit your detailed comments in writing to this lab within 10 days. Upon acceptance of this report, its contents and related charges, the invoice is due and payable within 30 days from the invoice date.

CARTER ANALYTICAL LABORATORY, INC.

LOWNEY ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO. 718-9E		PROJECT NAME/LOCATION Two HAYWARD PARCELS			NO. OF CON- TAINERS	ANALYSIS REQUIRED					SHIP TO:		
SAMPLER(S): (Signature) 						<div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;">Total Chromium VI</div>					LOWNEY ASSOCIATES 405 Clyde Avenue Mountain View, CA 94043 415-967-2365 415-967-2785 (FAX)		
DATE	TIME	SAMPLE DESCRIPTION			<input checked="" type="checkbox"/> Total Chromium VI						REMARKS		
12/6/91		SLAG SAMPLE D									5-DAY TURNAROUND		
<input checked="" type="checkbox"/> Relinquished by (Signature) ADDITIONAL ANALYSIS		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)			
Laboratory of Record: CARTER LABS		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks: ADDITIONAL ANALYSIS					

CARTER ANALYTICAL LABORATORY, INC.

590 DIVISION STREET • CAMPBELL, CA 95008 • (408) 364-3030 • FAX (408) 866-0319

REPORT FOR Stason Foster PO# 718-9E
Lowney Associates ORDER NO. 12032-TD DATE 12-30-91
 SUBJECT Analysis of Slag

Slag was leached at different pH and analyzed for selected metals by inductively coupled plasma (ICP) emission spectrometry. The samples were identified as follows.

<u>Sample</u>	<u>Customer Label</u>	<u>Description</u>
L1	A	slag
L2	A	slag-duplicate L1
L3	B	slag
L4	B	slag-duplicate L3
L5	C	slag
L6	C	slag-duplicate L5
L7	D	slag
L8	D	slag-duplicate L7
L9	E	slag
L10	E	slag-duplicate L9
L11	F	slag
L12	F	slag-duplicate L11

Sample Preparation

The crushed samples were shaken for 48 hours in deionized water, citric acid buffer adjusted to pH 1.5 or deionized water adjusted to pH 9, as indicated.

Metals Analysis

The ICP spectrometer was calibrated with standards and blanks, and each sample was analyzed. Any sample with element concentrations above the linear range was diluted and reanalyzed. The results, reported in milligrams per Liter (mg/L), are as follows.

<u>Metal</u>	<u>H₂O</u> <u>L3</u>	<u>pH 1.5</u> <u>L3</u>	<u>pH 9.0</u> <u>L3</u>
Copper	0.11	330.	105.

JAN 2 1992

REPORT APPROVED BY J.L. Carter TITLE QAQC Manager
Dr. A. Edward Robinson TITLE Laboratory Manager

This report completes this order. If you are not completely satisfied with the results stated in this report, or the charges for services rendered, submit your detailed comments in writing to this lab within 10 days. Upon acceptance of this report, its contents and related charges, the invoice is due and payable within 30 days from the invoice date.

CARTER ANALYTICAL LABORATORY, INC.

Metals Analysis - cont

<u>Metal - cont</u>	<u>H₂O</u> <u>L1</u>	<u>pH 1.5</u> <u>L1</u>	<u>pH 9.0</u> <u>L1</u>	<u>H₂O</u> <u>L5</u>	<u>pH 1.5</u> <u>L5</u>	<u>pH 9.0</u> <u>L5</u>
Antimony	< .040	1.2	0.20	< .040	2.53	< .040
Arsenic	< .030	2.2	0.27	< .030	2.80	0.13
Barium	0.33	35.6	4.30	0.20	8.33	4.3
Beryllium	< .010	< .010	< .010	< .010	< .010	< .010
Cadmium	< .003	< .003	< .003	< .003	0.20	< .003
Chromium	< .003	5.0	0.10	< .003	26.8	0.30
Cobalt	< .003	0.20	0.60	< .003	0.45	< .003
Copper	< .003	< .003	0.60	< .003	0.49	0.52
Lead	0.01	0.73	1.1	< .044	1.40	0.12
Mercury	< .010	0.52	0.13	< .010	0.71	< .010
Molybdenum	< .008	5.8	1.60	1.03	9.30	0.42
Nickel	< .008	0.5	0.30	< .008	2.42	< .008
Selenium	< .150	1.2	0.16	< .150	1.64	< .150
Silver	< .005	< .005	0.70	< .005	0.68	< .005
Thallium	0.22	1.8	0.12	< .060	1.95	0.02
Vanadium	< .006	1.7	0.34	< .006	2.5	0.36
Zinc	< .004	31.4	0.88	0.35	193.0	1.01

<u>Metal</u>	<u>H₂O</u> <u>L7</u>	<u>pH 1.5</u> <u>L7</u>	<u>pH 9.0</u> <u>L7</u>	<u>H₂O</u> <u>L9</u>	<u>pH 1.5</u> <u>L9</u>	<u>pH 9.0</u> <u>L9</u>
Antimony	< .040	3.43	< .040	0.860	0.99	< .040
Arsenic	< .030	3.65	0.05	< .030	1.7	< .030
Barium	< .006	31.8	3.1	0.85	4.7	1.5
Beryllium	< .010	< .010	< .010	< .010	0.01	< .010
Cadmium	< .003	0.16	< .003	< .003	0.17	< .003
Chromium	0.02	28.1	0.30	< .003	27.1	< .003
Cobalt	< .003	0.35	< .003	< .003	0.3	< .003
Copper	0.55	< .003	0.40	0.43	0.05	0.55
Lead	< .044	1.4	0.88	< .044	0.97	< .044
Mercury	< .010	0.96	< .010	< .010	0.69	< .010
Molybdenum	< .008	10.5	1.64	< .008	3.5	< .008
Nickel	< .008	1.80	< .008	< .008	0.84	< .008
Selenium	< .150	2.30	< .150	< .150	1.19	< .150
Silver	0.81	0.09	< .005	< .005	0.25	< .005
Thallium	< .060	2.60	0.01	< .060	1.63	< .060
Vanadium	< .006	6.60	0.72	0.19	1.55	0.28
Zinc	0.03	.314	1.44	< .004	54.2	< .004

Metals Analysis - cont

<u>Metal - cont</u>	<u>H₂O</u> <u>L11</u>	<u>pH 1.5</u> <u>L11</u>	<u>pH 9.0</u> <u>L11</u>
Antimony	< .040	< .040	0.90
Arsenic	< .030	< .030	0.51
Barium	0.89	16.8	1.91
Beryllium	< .010	< .010	< .010
Cadmium	< .003	< .003	< .003
Chromium	< .003	28.0	0.04
Cobalt	< .003	0.12	< .003
Copper	0.49	0.57	0.71
Lead	< .044	0.93	1.04
Mercury	< .010	0.41	0.21
Molybdenum	< .008	7.80	0.99
Nickel	< .008	2.32	< .008
Selenium	< .150	1.13	0.47
Silver	< .005	0.02	< .005
Thallium	< .060	3.70	0.16
Vanadium	< .006	4.40	0.58
Zinc	< .004	220.0	0.64

pH Measurement

The pH of the deionized water extracts was measured after the 48 hour leaching procedure. The results are as follows.

<u>Sample</u>	<u>Final pH</u>
L1	10.3
L3	7.9
L5	10.1
L7	9.5
L9	11.1
L11	11.1

Samples not collected within a two week period of time following the completion of analyses will be discarded unless otherwise specified.

If you would like to discuss the contents of the report, please contact your Technical Sales Representative.

LOWNEY ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:	
718-9E		TWO HAYWAO PARCELS			17 METALS STLC-PH 9.0	17 METALS STLC-DI WATER	17 METALS STLC-PH 1.5	Capac by STLC PH 9.0 PHS	MANAGE PH OF DI WATER AFTER EXTRACTION	LOWNEY ASSOCIATES 405 Clyde Avenue Mountain View, CA 94043 415-967-2365 415-967-2785 (FAX)		
DATE	TIME	SAMPLE DESCRIPTION								REMARKS		
12-6-91		A	3 Ag	2	X	X	X					5-DAY RESPONSE TIME
↓		B		2				X				
↓		C		2	X	X	X					
↓		D		2	X	X	X					
↓		E		2	X	X	X					
↓		F		2	X	X	X					
Relinquished by: (Signature)		Date	Time	Received By: (Signature)		Relinquished by: (Signature)		Date	Time	Received By: (Signature)		
FAXED		12-13-91	3:45pm									
Laboratory of Record:		Date	Time	Received for Laboratory By: (Signature)		Date	Time	Remarks:				
CARTER								SEE ATTACHED FAX COVER SHEET				



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

SIF

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9E
Sample Descript: Slag D
Lab Number: 112-4454

Sampled: Dec 6, 1991
Received: Dec 27, 1991
Reported: Jan 10, 1992

CORROSIVITY, IGNITABILITY, AND REACTIVITY

Analyte	Detection Limit	Sample Results
Corrosivity: pH.....	N.A.	9.9
Ignitability: Flashpoint (Pensky-Martens), °C.....	N.A.	> 100 °C
Reactivity: Sulfide, mg/kg.....	10	N.D.
Cyanide, mg/kg.....	0.50	N.D.
Reaction with water.....	N.A.	Negative

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

RECEIVED
JAN 14 1992

SEQUOIA ANALYTICAL

Maile A. Springer
Maile A. Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9E
Sample Descript: Slag A
Lab Number: 112-4455

Sampled: Dec 6, 1991
Received: Dec 27, 1991
Reported: Jan 10, 1992

CORROSIVITY, IGNITABILITY, AND REACTIVITY

Analyte	Detection Limit	Sample Results
Corrosivity: pH.....	N.A.	10.0
Ignitability: Flashpoint (Pensky-Martens), °C.....	N.A.	> 100 °C
Reactivity: Sulfide, mg/kg.....	10	N.D.
Cyanide, mg/kg.....	0.50	N.D.
Reaction with water.....	N.A.	Negative

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

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager

1124454.JVL <2>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9E

QC Sample Group: 1124454 - 55

Reported: Jan 10, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	pH	Cyanide	Sulfide
---------	----	---------	---------

Method:	EPA 9040	EPA 9010	EPA 9030
Analyst:	B.Ali	N.Zahedi	B.Samra
Reporting Units:	N.A.	mg/kg	mg/kg
Date Analyzed:	Dec 28, 1991	Dec 31, 1991	Dec 31, 1991
QC Sample #:	112-4454	112-3341	112-4327

Sample Conc.:	9.9	N.D.	N.D.
Spike Conc. Added:	N.A.	8.0	1300
Conc. Matrix Spike:	N.A.	8.6	1100
Matrix Spike % Recovery:	N.A.	108	85
Conc. Matrix Spike Dup.:	9.9	8.4	1100
Matrix Spike Duplicate % Recovery:	N.A.	104	85
Relative % Difference:	0.0	2.4	0.0

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

1124454.JVL <3>



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680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9E
Sample Descript: Slag D
Analysis Method: See below
Lab Number: 112-4454

Sampled: 12/6/91
Received: 12/27/91
Reported: 1/10/91

STATIC ACUTE HAZARDOUS WASTE BIOASSAY

Static
Cont. Flow

Species: Pimephales promelas
Common Name: Fathead Minnow
Mean length: 35 mm
Mean weight: 0.56 g
Supplier: Sticklebacks Unlimited
Acclimation Temp.: 17 degrees C

Organisms/Tank: 10
Replicates: 2
Organisms/Conc.: 20
Tank Depth: 13 cm
Tank Volume: 10 L

Screening
Definitive

Dilution Water: Synthetic Softwater

	Alkalinity, mg/L		Hardness, mg/L	
	Initial	Final	Initial	Final
Control	32	32	45	46
100 ppm	34	37	47	47
320 ppm	37	42	48	49
1000 ppm	39	46	49	50

DATE	Initial	24 Hr	48 Hr	72 Hr	96 Hr
	1/3/92	1/4/92	1/5/92	1/6/92	1/7/92

	DO				C				pH				# M				Total Dead				
	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead					
Control	10.2	17	7.5	0	8.5	17	7.4	0	8.3	17	7.3	1	8.4	17	7.1	1	8.8	17	7.2	1	1
100 ppm	8.9	17	7.6	0	8.1	17	7.5	0	8.5	17	7.1	0	8.5	17	7.4	0	8.7	17	7.3	0	0
180 ppm	8.7	17	7.7	0	8.1	17	7.5	0	7.8	17	7.1	0	7.8	17	7.3	0	8.0	17	7.3	0	0
320 ppm	8.8	17	7.5	0	8.0	17	7.5	0	8.1	17	7.2	0	8.4	17	7.4	0	8.6	17	7.4	0	0
560 ppm	9.1	17	7.6	0	8.0	17	7.5	0	8.3	17	7.2	0	8.5	17	7.4	0	8.8	17	7.4	0	0
1000 ppm	9.2	17	7.6	0	8.2	17	7.6	0	8.0	17	7.3	0	8.2	17	7.4	0	8.3	17	7.5	0	0

LC-50: > 1,000 ppm

LC-50 Calculation Method: Moving average angle

Remarks: _____

Analyst: R. Geckler

Method Reference: Static Acute Bioassay Procedures for Hazardous Waste Samples, September 1987, California Department of Fish and Game WPCL



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9E
Sample Descript: Slag D
Analysis Method: See below
Lab Number: 112-4454 (duplicate)

Sampled: 12/6/91
Received: 12/27/91
Reported: 1/10/91

STATIC ACUTE HAZARDOUS WASTE BIOASSAY

Static
Cont. Flow

Screening
Definitive

Species: Pimephales promelas
Common Name: Fathead Minnow
Mean length: 35 mm
Mean weight: 0.56 g
Supplier: Sticklebacks Unlimited
Acclimation Temp.: 17 degrees C

Organisms/Tank: 10
Replicates: 2
Organisms/Conc.: 20
Tank Depth: 13 cm
Tank Volume: 10 L

Dilution Water: Synthetic Softwater

Control
100 ppm
320 ppm
1000 ppm

Alkalinity, mg/L		Hardness, mg/L	
Initial	Final	Initial	Final
32	32	45	46
35	38	46	48
37	43	47	50
39	47	48	51

DATE	Initial	24 Hr	48 Hr	72 Hr	96 Hr
	1/3/92	1/4/92	1/5/92	1/6/92	1/7/92

	DO	C	pH	DO	C	pH	# M	DO	C	pH	# M	DO	C	pH	# M	DO	C	pH	# M	Total Dead
	mg/L	Temp	Units	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	
Control	10.2	17	7.5	8.5	17	7.4	0	8.3	17	7.3	1	8.4	17	7.1	1	8.8	17	7.2	1	1
100 ppm	8.9	17	7.5	8.2	17	7.4	0	7.5	17	7.2	0	8.4	17	7.4	0	8.8	17	7.4	0	0
180 ppm	9.9	17	7.5	8.7	17	7.5	0	8.9	17	7.3	0	8.9	17	7.4	0	9.2	17	7.5	0	0
320 ppm	8.6	17	7.5	8.0	17	7.4	0	7.9	17	7.3	0	8.0	17	7.4	0	8.4	17	7.4	0	0
560 ppm	9.0	17	7.6	8.4	17	7.5	0	8.3	17	7.3	0	8.4	17	7.4	0	9.0	17	7.6	0	0
1000 ppm	9.6	17	7.7	8.5	17	7.6	0	8.5	17	7.4	0	8.7	17	7.5	0	8.9	17	7.6	0	0

LC-50: > 1,000 ppm

LC-50 Calculation Method: Moving average angle

Remarks: _____

Analyst: R. Geckler

Method Reference: Static Acute Bioassay Procedures for Hazardous Waste Samples, September 1987, California Department of Fish and Game WPCL.

SEQUOIA ANALYTICAL

Maile A. Springer
Maile A. Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9E
Sample Descript: Slag A
Analysis Method: See below
Lab Number: 1124455

Sampled: 12/6/91
Received: 12/27/91
Reported: 1/10/91

STATIC ACUTE HAZARDOUS WASTE BIOASSAY

Static
Cont. Flow

Species: Pimephales promelas
Common Name: Fathead Minnow
Mean length: 35 mm
Mean weight: 0.56 g
Supplier: Sticklebacks Unlimited
Acclimation Temp.: 17 degrees C

Organisms/Tank: 10
Replicates: 2
Organisms/Conc.: 20
Tank Depth: 13 cm
Tank Volume: 10 L

Screening
Definitive

Dilution Water: Synthetic Softwater

	Alkalinity, mg/L		Hardness, mg/L	
	Initial	Final	Initial	Final
Control	32	32	45	46
100 ppm	32	32	44	43
320 ppm	35	38	47	50
1000 ppm	38	44	48	57

DATE	Initial	24 Hr	48 Hr	72 Hr	96 Hr
	1/3/92	1/4/92	1/5/92	1/6/92	1/7/92

	DO				C				pH				# M				Total Dead				
	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead					
Control	10.2	17	7.5	0	8.5	17	7.4	0	8.3	17	7.3	1	8.4	17	7.1	1	8.8	17	7.2	1	1
100 ppm	8.9	17	7.5	0	8.1	17	7.4	0	6.8	17	7.1	0	7.0	17	7.2	0	8.0	17	7.1	0	0
180 ppm	9.9	17	7.4	0	8.0	17	7.4	0	8.2	17	7.2	0	8.1	17	7.3	0	8.8	17	7.3	0	0
320 ppm	9.7	17	7.4	0	7.9	17	7.4	0	8.5	17	7.3	0	8.2	17	7.3	0	8.9	17	7.4	0	0
560 ppm	9.4	17	7.5	0	8.3	17	7.4	0	8.7	17	7.4	0	8.9	17	7.5	0	9.0	17	7.5	0	0
1000 ppm	10.2	17	8.1	0	8.9	17	7.6	0	8.4	17	7.5	0	8.6	17	7.5	0	8.9	17	7.5	0	0

LC-50: > 1,000 ppm

LC-50 Calculation Method: Moving average angle

Remarks: _____

Analyst: R. Geckler

Method Reference: Static Acute Bioassay Procedures for Hazardous Waste Samples, September 1987, California Department of Fish and Game WFCL.



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9E
Sample Descript: Slag A
Analysis Method: See below
Lab Number: 1124455 (duplicate)

Sampled: 12/6/91
Received: 12/27/91
Reported: 1/10/91

STATIC ACUTE HAZARDOUS WASTE BIOASSAY

Static
Cont. Flow

Species: Pimephales promelas
Common Name: Fathead Minnow
Mean length: 35 mm
Mean weight: 0.56 g
Supplier: Sticklebacks Unlimited
Acclimation Temp.: 17 degrees C

Organisms/Tank: 10
Replicates: 2
Organisms/Conc.: 20
Tank Depth: 13 cm
Tank Volume: 10 L

Screening
Definitive

Dilution Water: Synthetic Softwater

Control
100 ppm
320 ppm
1000 ppm

Alkalinity, mg/L		Hardness, mg/L	
Initial	Final	Initial	Final
32	32	45	46
33	33	44	44
37	39	48	51
39	45	49	58

DATE	Initial	24 Hr	48 Hr	72 Hr	96 Hr
	1/3/92	1/4/92	1/5/92	1/6/92	1/7/92

	DO		C		pH		# M Dead	DO		C		pH		# M Dead	DO		C		pH	# M Dead	Total Dead
	mg/L	Temp	Units	mg/L	Temp	Units		mg/L	Temp	Units	mg/L	Temp	Units		mg/L	Temp	Units	mg/L			
Control	10.2	17	7.5	8.5	17	7.4	0	8.3	17	7.3	1	8.4	17	7.1	1	8.8	17	7.2	1	1	
100 ppm	9.9	17	7.4	8.4	17	7.4	0	8.2	17	7.3	0	8.3	17	7.4	0	8.8	17	7.3	0	0	
180 ppm	9.2	17	7.6	8.9	17	7.5	0	8.3	17	7.3	0	8.5	17	7.3	0	8.6	17	7.3	0	0	
320 ppm	9.3	17	7.5	9.0	17	7.6	0	9.0	17	7.5	0	8.9	17	7.4	0	9.3	17	7.5	0	0	
560 ppm	9.6	17	7.7	8.4	17	7.8	0	8.2	17	7.5	0	8.3	17	7.5	0	8.6	17	7.5	0	0	
1000 ppm	9.4	17	7.8	9.0	17	7.7	0	8.7	17	7.5	0	8.5	17	7.5	0	8.9	17	7.6	0	0	

LC-50: > 1,000 ppm

LC-50 Calculation Method: Moving average angle

Remarks: _____

Analyst: R. Geckler

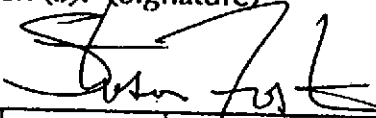
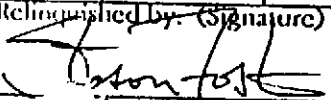
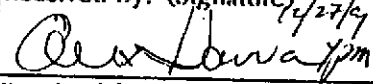
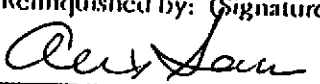
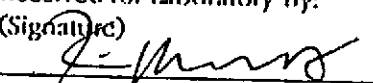
Method Reference: Static Acute Bioassay Procedures for Hazardous Waste Samples, September 1987, California Department of Fish and Game WPCL

SEQUOIA ANALYTICAL

Malle A. Springer
Malle A. Springer
Project Manager

**LOWNEY ASSOCIATES
CHAIN OF CUSTODY RECORD**

COPY

JOB NO. 716-9F		PROJECT NAME/LOCATION 32 Acre Hayward Parcel		NO. OF CONTAINERS	ANALYSIS REQUIRED					SHIP TO:			
SAMPLER(S): (Signature) 					Reactivity	Corrosivity	Toxicity	Ignitability	LOWNEY ASSOCIATES 405 Clyde Avenue Mountain View, CA 94043 415-967-2365 415-967-2785 (FAX)				
DATE	TIME	SAMPLE DESCRIPTION							REMARKS				
12/6/91	12/6/91	Slag D 1124454		2	X	X	X	X	Normal Turnaround (2 WEEK)				
12/6/91	12/6/91	Slag A d 55		2	X	X	X	X	Save samples - will want samples returned				
									CRUSH SAMPLES PER EPA GUIDELINES				
Relinquished By: (Signature) 		Date	Time	Received By: (Signature) 	Relinquished by: (Signature) 		Date	Time	Received By: (Signature)				
y of Record: 01a		Date	Time	Received for Laboratory By: (Signature) 	Date	Time	Remarks:						
					12-27	5:20							

skason

ENVIRONMENTAL ANALYSIS REPORT

LOWNEY ASSOC.

JAN 13 1992

RECEIVED

CARTER ANALYTICAL LABORATORY, INC.

590 DIVISION STREET • CAMPBELL, CA 95008 • (408) 364-3030 • FAX (408) 866-0319

ANALYSIS REPORT
FOR

Lowney Associates
405 Clyde Avenue
Mt. View, CA 94043

CONTACT: Stason Foster

DATE: 01-09-92

CHAIN OF CUSTODY ID NO: 718-9E

ORDER NO: 12073-TD P.O. NO: 7189E

SITE DESCRIPTION: Two Hayward Parcels

SAMPLE DESCRIPTION:

Soil
Sampled: 12-26-91
Received: 12-27-91
Analyzed: 01-06-92
Number of Samples: 48

REQUESTED ANALYSIS:

Methods: EPA 6010, EPA 9040, Title 22, Section 66700

The analyses reported are considered accurate. Should you wish further support for the reported data, submit your requirements in writing within 10 days. It is Carter Analytical Labs intent to give you complete satisfaction. Please reference the order number when communicating with us. The invoice is due and payable within 30 days from invoice date.

Hazardous Materials Certification No: 304 • Drinking Water Certification No: 953
from the
State of California • Department of Health Services

CARTER ANALYTICAL LABORATORY, INC.

590 DIVISION STREET • CAMPBELL, CA 95008 • (408) 364-3030 • FAX (408) 866-0319

<u>Sample</u>	<u>Customer Label</u>	<u>Description</u>
L1	P-1 2.5'	soil
L2	P-1 2.5'	soil-composite-L1
L3	P-1 2.5'	soil-composite-L1
L4	P-1 2.5'	soil-composite-L1
L5	P-2 2.5'	soil
L6	P-2 2.5'	soil-composite-L5
L7	P-2 2.5'	soil-composite-L5
L8	P-2 2.5'	soil-composite-L5
L9	P-3 2.0'	soil
L10	P-3 2.0'	soil-composite-L9
L11	P-3 2.0'	soil-composite-L9
L12	P-3 2.0'	soil-composite-L9
L13	P-4 2.0'	soil
L14	P-4 2.0'	soil-composite-L13
L15	P-4 2.0'	soil-composite-L13
L16	P-4 2.0'	soil-composite-L13
L17	P-5 2.5'	soil
L18	P-5 2.5'	soil-composite-L17
L19	P-5 2.5'	soil-composite-L17
L20	P-5 2.5'	soil-composite-L17
L21	P-6 3.0'	soil
L22	P-6 3.0'	soil-composite-L21
L23	P-6 3.0'	soil-composite-L21
L24	P-6 3.0'	soil-composite-L21
L25	P-7 1.5'	soil
L26	P-7 1.5'	soil-composite-L25
L27	P-7 1.5'	soil-composite-L25
L28	P-7 1.5'	soil-composite-L25
L29	P-8 3.0'	soil
L30	P-8 3.0'	soil-composite-L29
L31	P-8 3.0'	soil-composite-L29
L32	P-8 3.0'	soil-composite-L29
L33	P-9 2.0'	soil
L34	P-9 2.0'	soil-composite-L33
L35	P-9 2.0'	soil-composite-L33
L36	P-9 2.0'	soil-composite-L33
L37	P-10 2.0'	soil
L38	P-10 2.0'	soil-composite-L37
L39	P-10 2.0'	soil-composite-L37
L40	P-10 2.0'	soil-composite-L37
L41	P-11 1.5'	soil
L42	P-11 1.5'	soil-composite-L41
L43	P-11 1.5'	soil-composite-L41
L44	P-11 1.5'	soil-composite-L41
L45	P-12 1.5'	soil
L46	P-12 1.5'	soil-composite-L45
L47	P-12 1.5'	soil-composite-L45
L48	P-12 1.5'	soil-composite-L45

Sample Preparation

The samples were prepared according to Title 22, TTLC procedures.

Title 22 Waste Metals Analysis by EPA method 6010

<u>Metal</u>	<u>L1 P-1 2.5' (mg/Kg)</u>	<u>L5 P-2 2.5' (mg/Kg)</u>	<u>STLC Regulatory Levels</u>	<u>TTLC Regulatory Levels</u>	<u>TTLC Detection Limits (mg/Kg)</u>
Copper	31.2	43.9	25.	2500	0.015
Lead	31.0	41.8	5.0	1000	0.044
Mercury	11.1	17.7	0.2	20	0.040
Selenium	25.0	39.8	1.0	100	0.15
Zinc	60.8	73.8	250.	5000	0.009

<u>Metal</u>	<u>L9 P-3 2.0' (mg/Kg)</u>	<u>L13 P-4 2.0' (mg/Kg)</u>	<u>STLC Regulatory Levels</u>	<u>TTLC Regulatory Levels</u>	<u>TTLC Detection Limits (mg/Kg)</u>
Copper	30.1	49.1	25.	2500	0.015
Lead	30.9	41.3	5.0	1000	0.044
Mercury	19.2	20.3	0.2	20	0.040
Selenium	37.3	37.8	1.0	100	0.15
Zinc	57.0	84.3	250.	5000	0.009

<u>Metal</u>	<u>L17 P-5 2.5' (mg/Kg)</u>	<u>L21 P-6 3.0' (mg/Kg)</u>	<u>STLC Regulatory Levels</u>	<u>TTLC Regulatory Levels</u>	<u>TTLC Detection Limits (mg/Kg)</u>
Copper	46.5	49.1	25.	2500	0.015
Lead	44.5	44.4	5.0	1000	0.044
Mercury	14.1	18.2	0.2	20	0.040
Selenium	34.4	41.6	1.0	100	0.15
Zinc	89.8	77.2	250.	5000	0.009

<u>Metal</u>	<u>L25 P-7 1.5' (mg/Kg)</u>	<u>L29 P-8 3.0' (mg/Kg)</u>	<u>STLC Regulatory Levels</u>	<u>TTLC Regulatory Levels</u>	<u>TTLC Detection Limits (mg/Kg)</u>
Copper	30.9	40.6	25.	2500	0.015
Lead	31.4	44.1	5.0	1000	0.044
Mercury	10.3	12.9	0.2	20	0.040
Selenium	25.0	34.4	1.0	100	0.15
Zinc	55.2	73.9	250.	5000	0.009

Title 22 Waste Metals Analysis by EPA method 6010 - cont

<u>Metal</u>	<u>L33 P-9 2.0' (mg/Kg)</u>	<u>L37 P-10 2.0' (mg/Kg)</u>	<u>STLC Regulatory Levels</u>	<u>TTLIC Regulatory Levels</u>	<u>TTLIC Detection Limits (mg/Kg)</u>
Copper	40.8	33.6	25.	2500	0.015
Lead	43.7	34.8	5.0	1000	0.044
Mercury	14.1	12.4	0.2	20	0.040
Selenium	34.7	32.1	1.0	100	0.15
Zinc	94.8	63.1	250.	5000	0.009

<u>Metal</u>	<u>L41 P-11 1.5' (mg/Kg)</u>	<u>L45 P-12 1.5' (mg/Kg)</u>	<u>STLC Regulatory Levels</u>	<u>TTLIC Regulatory Levels</u>	<u>TTLIC Detection Limits (mg/Kg)</u>
Copper	23.1	29.1	25.	2500	0.015
Lead	29.4	30.8	5.0	1000	0.044
Mercury	8.63	10.8	0.2	20	0.040
Selenium	28.8	26.7	1.0	100	0.15
Zinc	51.8	52.3	250.	5000	0.009

Sample Preparation

The samples were prepared according to Title 22 STLC modified procedures using leaching solution of the same pH as the soil samples.

Title 22 Waste Metals Analysis by EPA method 6010

<u>Metal</u>	<u>L1 P-1 2.5' (mg/L)</u>	<u>L5 P-2 2.5' (mg/L)</u>	<u>L9 P-3 2.0' (mg/L)</u>	<u>L13 P-4 2.0' (mg/L)</u>	<u>STLC Regulatory Levels</u>	<u>Detection Limits (mg/L)</u>
Copper	0.33	0.38	0.26	0.32	25.	.003
Lead	LDL	LDL	LDL	LDL	5.0	.044
Mercury	0.19	0.25	0.26	0.15	0.2	.010
Selenium	0.19	0.36	0.30	0.20	1.0	.150
Zinc	0.13	0.09	0.09	0.13	250.	.004

<u>Metal</u>	<u>L17 P-5 2.5' (mg/L)</u>	<u>L21 P-6 3.0' (mg/L)</u>	<u>L25 P-7 1.5' (mg/L)</u>	<u>L29 P-8 3.0' (mg/L)</u>	<u>STLC Regulatory Levels</u>	<u>Detection Limits (mg/L)</u>
Copper	0.52	0.31	0.37	0.36	25.	.003
Lead	0.21	LDL	LDL	LDL	5.0	.044
Mercury	0.11	0.13	0.16	0.17	0.2	.010
Selenium	LDL	LDL	0.21	LDL	1.0	.150
Zinc	0.11	LDL	0.09	LDL	250.	.004

<u>Metal</u>	<u>L33 P-9 2.0' (mg/L)</u>	<u>L37 P-10 2.0' (mg/L)</u>	<u>L41 P-11 1.5' (mg/L)</u>	<u>L45 P-12 1.5' (mg/L)</u>	<u>STLC Regulatory Levels</u>	<u>Detection Limits (mg/L)</u>
Copper	0.59	0.29	0.30	0.58	25.	.003
Lead	LDL	LDL	LDL	0.24	5.0	.044
Mercury	0.13	0.15	0.11	0.22	0.2	.010
Selenium	0.21	0.23	0.17	0.47	1.0	.150
Zinc	0.45	0.12	LDL	0.79	250.	.004

EPA 9040 Analysis

<u>Sample</u>	<u>pH</u>
L1 (P-1 2.5')	6.83
L5 (P-2 2.5')	7.07
L9 (P-3 2.0')	6.82
L13 (P-4 2.0')	7.19
L17 (P-5 2.5')	6.96
L21 (P-6 3.0')	8.34
L25 (P-7 1.5')	7.45
L29 (P-8 3.0')	9.13
L33 (P-9 2.0')	9.01
L37 (P-10 2.0')	8.57
L41 (P-11 1.5')	8.83
L45 (P-12 1.5')	3.75

CARTER ANALYTICAL LABORATORY

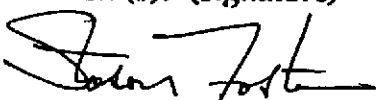
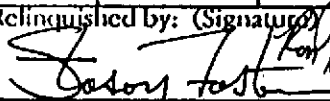
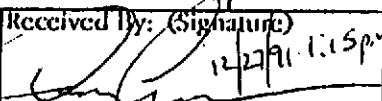



Dr. A. Edward Robinson
Laboratory Manager


P.L. Carter
QA/QC Manager

LOWNEY ASSOCIATES

CHAIN OF CUSTODY RECORD

JOB NO.		PROJECT NAME/LOCATION			NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:							
718-9E		TWO HAYWARD PARCELS				PH	TOTAL COPPER	LEAD	ZINC	STANDARD TLCL	TiFe 22	SOLUBLE METALS AS NOTED BELOW	COPPER, LEAD, ZINC, PH OF SOIL	MODIFIED TLCL	USE SOIL WITH PH 5.0-6.5	LOWNEY ASSOCIATES 405 Clyde Avenue Mountain View, CA 94013 415-967-2365 415-967-2785 (FAX)			
SAMPLER (S): (Signature)					REMARKS														
																			
DATE	TIME	SAMPLE DESCRIPTION																	
12/26/91		P-1	2.5'	Soil	4	X	X			X							Composite - Extraction solution		
		P-2	2.5'		4	X	X			X							must be of similar		
		P-3	2.0'		4	X	X			X							pH to that of the soil		
		P-4	2.0'		4	X	X			X							for STLC		
		P-5	2.5'		4	X	X			X									
		P-6	3.0'		4	X	X			X									
		P-7	1.5'		4	X	X			X							Save all samples		
		P-8	3.0'		4	X	X			X									
		P-9	2.0'		4	X	X			X									
		P-10	2.0'		4	X	X			X									
		P-11	1.5'		4	X	X			X									
		P-12	1.5'		4	X	X			X									
STANDARD TURNAROUND																			
Relinquished by: (Signature)					Date		Time		Received By: (Signature)					Date		Time		Received By: (Signature)	
					12/27		1:15 PM												
Laboratory of Record:					Date		Time		Received for Laboratory By:					Date		Time		Remarks:	
CARTER LABS																		USE EXTRACTION SOLUTION WITH FOR SOLUBLE METALS: SOIL SAMPLE. (STANDARD 48hr EXTRACTION) A PH SIMILAR TO THAT OF THE	

ENVIRONMENTAL ANALYSIS REPORT

CARTER ANALYTICAL LABORATORY, INC.

590 DIVISION STREET • CAMPBELL, CA 95008 • (408) 364-3030 • FAX (408) 866-0319

ANALYSIS REPORT
FORLowney Associates
405 Clyde Avenue
Mt. View, CA 94043

CONTACT: Stason Foster

DATE: 01-20-92

CHAIN OF CUSTODY ID NO: 718-9E

ORDER NO: 12110-TD P.O. NO: 7189-E

SITE DESCRIPTION: Two Hayward Parcels

SAMPLE DESCRIPTION:

Soil
Sampled: 12-26-91
Received: 12-27-91
Analyzed: 01-14-92
Number of Samples: 8

REQUESTED ANALYSIS:

Methods: EPA 7471, EPA 9040, Title 22, Section 66700

The analyses reported are considered accurate. Should you wish further support for the reported data, submit your requirements in writing within 10 days. It is Carter Analytical Labs intent to give you complete satisfaction. Please reference the order number when communicating with us. The invoice is due and payable within 30 days from invoice date.

Hazardous Materials Certification No: 304 • Drinking Water Certification No: 953
from the
State of California • Department of Health Services

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CARTER ANALYTICAL LABORATORY, INC

Environmental Data

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Order 12110

Project No. 718-9E

<u>Sample</u>	<u>Customer Label</u>	<u>Description</u>
L1	P-2 2.5'	soil
L2	P-2 2.5'	soil-composite L1
L3	P-2 2.5'	soil-composite L1
L4	P-2 2.5'	soil-composite L1
L5	P-3 2.0'	soil
L6	P-3 2.0'	soil-composite L5
L7	P-3 2.0'	soil-composite L5
L8	P-3 2.0'	soil-composite L5

Sample Preparation

The samples were prepared according to Title 22, Section 66700; Total Threshold Limit Concentration (TTL) procedures.

EPA 7471 Analysis

<u>Metal</u>	<u>L1</u> <u>(mg/Kg)</u>	<u>L5</u> <u>(mg/Kg)</u>	<u>TTL</u> <u>Regulatory</u> <u>Levels</u>	<u>Detection</u> <u>Limits</u> <u>(mg/Kg)</u>
Mercury	LDL	LDL	20.	0.010

LDL indicates results were less than detection limit.

Note: Comparing these results with those obtained for mercury by ICP, [from previous report #12073], it is obvious that matrix affects generate false positives in the ICP method.

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Environmental Data

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Order 12110

Project No. 718-9E

<u>Sample</u>	<u>Customer Label</u>	<u>Description</u>
L1	P-2 2.5'	soil
L2	P-2 2.5'	soil-composite L1
L3	P-2 2.5'	soil-composite L1
L4	P-2 2.5'	soil-composite L1
L5	P-3 2.0'	soil
L6	P-3 2.0'	soil-composite L5
L7	P-3 2.0'	soil-composite L5
L8	P-3 2.0'	soil-composite L5

Sample Preparation

The samples were prepared according to Title 22 STLC modified procedures, using leaching solution of the same pH as the soil samples.

EPA 7471 Analysis

<u>Metal</u>	<u>L1 (mg/L)</u>	<u>L5 (mg/L)</u>	<u>STLC Regulatory Levels</u>	<u>Detection Limits (mg/L)</u>
Mercury	LDL	LDL	0.2	0.010

LDL indicates results were less than detection limit.

Note: Comparing these results with those obtained for mercury by ICP, [from previous report #12073], it is obvious that matrix affects generate false positives in the ICP method.

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Order 12110
Project No. 718-9E


<u>Sample</u>	<u>Customer Label</u>	<u>Description</u>
L1	P-2 2.5'	soil
L2	P-2 2.5'	soil-composite L1
L3	P-2 2.5'	soil-composite L1
L4	P-2 2.5'	soil-composite L1
L5	P-3 2.0'	soil
L6	P-3 2.0'	soil-composite L5
L7	P-3 2.0'	soil-composite L5
L8	P-3 2.0'	soil-composite L5

EPA 9040

<u>Sample</u>	<u>pH</u>
L1	7.07
L5	6.82

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CARTER ANALYTICAL LABORATORY


Dr. A. Edward Robinson
Laboratory Manager


J.L. Carter
QAQC Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9E
Sample Descript: Soil, Slag A
Lab Number: 1124-455 A - B

Sampled: Dec 6, 1991
Relogged: Feb 3, 1992
Extracted: Feb 3, 1992
Analyzed: Feb 3, 1992
Reported: Feb 5, 1992

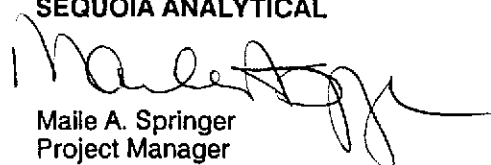
LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Arsenic	0.25	5.5
Selenium	0.25	4.1

LOWNEY ASSOC.
FEB 7 1992
RECEIVED

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

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager



SEQUOIA ANALYTICAL

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(415) 364-9600 • FAX (415) 364-9233

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attention: Stason Foster

Client Project ID: #718-9E

QC Sample Group: 112-4455

Reported: Feb 5, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Arsenic	Selenium
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Method:	EPA 7060	EPA 7740
Analyst:	K.Newberry	K.Newberry
Reporting Units:	mg/kg	mg/kg
Date Analyzed:	Feb 23, 1992	Feb 23, 1992
QC Sample #:	112-4455	112-4455
Sample Conc.:	5.5	4.1
Spike Conc. Added:	100	100
Conc. Matrix Spike:	130	130
Matrix Spike % Recovery:	125	126
Conc. Matrix Spike Dup.:	120	110
Matrix Spike Duplicate % Recovery:	115	106
Relative % Difference:	8.0	17

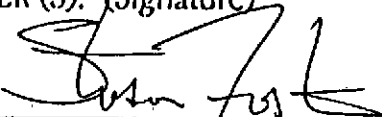
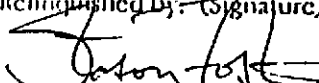

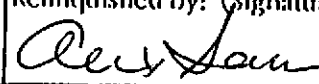
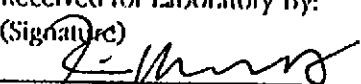
SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

1124-455.JVL <2>

LOWNEY ASSOCIATES CHAIN OF CUSTODY RECORD

JOB NO. 716-9F		PROJECT NAME/LOCATION 32 Acre Hayward Parcel			NO. OF CONTAINERS	ANALYSIS REQUIRED				SHIP TO: LOWNEY ASSOCIATES 405 Clyde Avenue Mountain View, CA 94043 415-967-2365 415-967-2785 (FAX)		
SAMPLER(S): (Signature) 												
DATE	TIME	SAMPLE DESCRIPTION				Reactivity	Corrosivity	Toxicity	Ignitability	REMARKS		
12/6/91	12/6/91	Slag D 1124454			2	X	X	X	X	Normal Turnaround (2 WEEK)		
12/6/91	12/6/91	Slag A ↓ SS			2	X	X	X	X	Save samples - will want samples returned		
										CRUSH SAMPLES PER EPA GUIDELINES		
Relinquished By: (Signature) 		Date	Time	Received By: (Signature) 		Relinquished By: (Signature) 		Date	Time	Received By: (Signature)		
Laboratory of Record: Sequoia		Date	Time	Received for Laboratory By: (Signature) 		Date	Time	Remarks:				
		12/27	4:00 PM			12/27	5:20					