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February 16, 1993

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Mr. Dan Nourse
1600 63rd Street Associates, Inc.
c/o Wareham Property Group
1120 Nye Street, Suite 400
San Rafael, California 94901

November 1992 Groundwater Monitoring Report
1600 63rd Street
Emeryville, California 94608

Dear Mr. Nourse:

This letter presents the results of the groundwater monitoring performed in November 1992 by Harding Lawson Associates (HLA) at 1600 63rd Street, Emeryville, California. HLA installed five groundwater monitoring wells at this site (Plate 1) in May and June 1989. The results of the initial groundwater sampling and analysis and an evaluation of water-level measurements along with a summary of investigations and remediation performed at the site by HLA and others were presented in HLA's October 2, 1989, report, *Groundwater Quality Investigation, 1600 63rd Street, Emeryville, California*. Details of the investigations and remedial activities conducted prior to HLA's involvement were presented in a December 1988 report prepared by Engineering Science (ES) of Berkeley, California.

In the 1989 report, HLA recommended that groundwater monitoring be continued at the site for 1 year to document the distribution of chemicals in the groundwater. The initial year of quarterly sampling was completed, and the data were presented in HLA's letter, *Fourth Quarter Groundwater Monitoring, 1600 63rd Street, Emeryville, California*, dated August 8, 1990. Because detected concentrations of total petroleum hydrocarbons increased during the fourth-quarter sampling round (March 1990) and gamma-BHC was detected, HLA recommended that groundwater monitoring and a modified analytical program be continued for another year. Four additional quarters of groundwater monitoring were performed, and the results of the fourth quarterly sampling were presented in HLA's letter, *Quarterly Groundwater Monitoring, May 1991, 1600 63rd Street, Emeryville, California*, dated November 21, 1991. This report presents the results of an additional groundwater monitoring round that was performed in November 1992.

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FIELD INVESTIGATION

All water-level measurement and sampling equipment was decontaminated prior to use in each well. The sampling equipment had been washed with hot pressurized water at HLA's Novato office and wrapped in clean plastic before being transported to the site. The water-level measurement equipment was decontaminated at the site by washing with a low-phosphate soap solution and rinsing three times with deionized water. The rinsate was contained in a 55-gallon steel drum that is stored in a secured steel containment structure onsite.

On November 19, 1992, an electronic oil-water interface probe was used to measure the depth to water and the thickness of any floating product in each of the five monitoring wells. The groundwater in each well was also visually inspected for the presence of floating petroleum hydrocarbons by carefully lowering a clear Lucite bailer into the well, removing it, and observing the water/product interface, if present.

After measuring the depth to water in all five wells, the wells were purged using a PVC bailer. Conductivity, pH, turbidity, and temperature were measured during well purging. The wells were purged of approximately three well casing volumes prior to sampling. All purged water was stored in labeled 55-gallon steel drums in a secured steel containment structure onsite.

Immediately following the purging of each well, one groundwater sample was collected using a clean stainless steel bailer and decanted into laboratory-prepared sample bottles. A duplicate was collected from Well MW-2. The samples were labeled, placed in a refrigerated environment, and transported under chain of custody to the analytical laboratory.

GROUNDWATER FLOW DIRECTION

The groundwater elevations and product thicknesses measured from August 1989 to November 1992 are presented in Table 1. Compared to the previous sampling round conducted in May 1991, water-level elevation changes ranged from a 0.43-foot decrease in Well MW-1 to a 0.32-foot increase in Well MW-2. The water-level elevations measured in November are shown on Plate 1. The general groundwater flow direction is toward the west.

In Well MW-2, a product thickness of 0.03 foot was measured with the oil-interface probe. Black floating product was observed in the Lucite bailer at a similar thickness. No product was observed in the other four wells.

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LABORATORY ANALYSIS AND RESULTS

The groundwater samples and duplicate were analyzed by Superior Precision Analytical, Inc., of San Francisco, California, for petroleum hydrocarbons and purgeable aromatic compounds and by Clayton Environmental of Pleasanton, California for organochlorine pesticides and polycyclic aromatic hydrocarbons (PAHs). Both are state-certified laboratories for the analyses performed. The samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline, diesel, kerosene, and motor oil using modified EPA Test Method 8015, for organochlorine pesticides using EPA Test Method 8080, and for purgeable aromatics using EPA Test Method 8020. The groundwater sample and duplicate from Well MW-2 were also analyzed for PAHs using EPA Test Method 8310. Copies of the laboratory report and chain of custody form for this sampling round are attached.

The results for compounds detected during this and previous quarterly sampling rounds are summarized in Table 2. The analyzed compounds were detected only in the samples from Wells MW-2 and MW-3. The groundwater sample and duplicate from Well MW-2 contained TPH as diesel at 11 and 22 parts per million (ppm), TPH as gasoline at 0.72 and 0.59 ppm, TPH as motor oil at 0.29 and 0.56 ppm, and TPH as kerosene at 14 and 27 ppm, respectively. Toluene, total xylenes, fluorene, and phenanthrene were detected at concentrations of 0.0019, 0.0037, 0.030, and 0.040 ppm in the groundwater sample from Well MW-2 and 0.0014, 0.0015, 0.030, and 0.050 ppm in the duplicate, respectively. Organochlorine pesticides were only detected in the groundwater sample from Well MW-3; 4,4'-DDD was detected at a concentration of 0.00003 ppm. TPH, purgeable aromatics, and organochlorine pesticides were not detected in the other groundwater samples from the November 1992 sampling round.

DISCUSSION

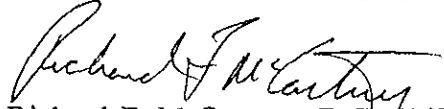
TPH as gasoline and diesel has been detected on a consistent basis in groundwater samples from Well MW-2 since late 1989. Other hydrocarbon-related constituents (e.g., toluene, total xylenes, fluorene, and phenanthrene) have also been detected in groundwater samples from Well MW-2. Low concentrations of TPH as gasoline and diesel have previously been detected in groundwater samples from Wells MW-1, MW-3 and MW-4, but they were not detected during this sampling round. TPH has never been detected in groundwater samples from Well MW-5. Organochloride pesticides (including endrin aldehyde, heptachlor, and 4,4'-DDD) and PCB-1260 have been sporadically detected in groundwater samples at low concentrations from Wells MW-1, MW-2, and MW-3; however, none of these constituents have been detected consistently, nor have they been detected for more than 2 years except for a low concentration of 0.00003 ppm 4,4'-DDD in the sample from Well MW-3.

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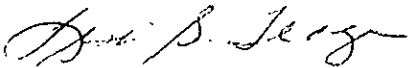
If you have any questions, please call.

Very truly yours,

HARDING LAWSON ASSOCIATES



Richard F. McCartney, R.G. 5140
Project Geologist



Lisa S. Teague
Principal Geologist

Attachments: Table 1 - Groundwater Elevations
Table 2 - Chemical Concentrations in Groundwater
Plate 1 - Site Map
Laboratory Report and Chain of Custody Form

cc: Dennis Byrne, Alameda County Department of Environmental Health
Steven Ritchie, California Regional Water Quality Control Board,
San Francisco Bay Region

RFM/LST/kke/K27184-H

**Table 1. Groundwater Elevations
November 1992 Groundwater Monitoring Report
1600 63rd Street, Emeryville**

| Well Number | Top of Casing Elevation (Feet Above MSL) | Date Measured | Depth To Product From Top of Casing (Feet) | Depth To Water From Top of Casing (Feet) | Product Thickness (Feet) | Product Level Elevation (Feet) | Water-Level Elevation, Corrected for Product (Feet) | Change In Water-Level Elevation (Feet) |
|-------------|--|---------------|--|--|--------------------------|--------------------------------|---|--|
| MW-1 | 15.12 | 03-Aug-89 | No Product | 5.99 | 0.00 | No Product | 9.13 | -- |
| | | 21-Sep-89 | No Product | 5.81 | 0.00 | No Product | 9.31 | 0.18 |
| | | 20-Oct-89 | No Product | 6.24 | 0.00 | No Product | 8.88 | -0.43 |
| | | 20-Dec-89 | No Product | 6.09 | 0.00 | No Product | 9.03 | 0.15 |
| | | 20-Mar-90 | No Product | 5.87 | 0.00 | No Product | 9.25 | 0.22 |
| | | 20-Jul-90 | No Product | 5.75 | 0.00 | No Product | 9.37 | 0.12 |
| | | 12-Nov-90 | No Product | 6.04 | 0.00 | No Product | 9.08 | -0.29 |
| | | 07-Feb-91 | No Product | 6.65 | 0.00 | No Product | 8.47 | -0.61 |
| | | 08-May-91 | No Product | 6.17 | 0.00 | No Product | 8.95 | 0.48 |
| | | 19-Nov-92 | No Product | 6.60 | 0.00 | No Product | 8.52 | -0.43 |
| MW-2 | 14.43 | 03-Aug-89 | No Product | 6.66 | 0.00 | No Product | 7.77 | -- |
| | | 21-Sep-89 | No Product | 6.32 | 0.00 | No Product | 8.11 | 0.34 |
| | | 20-Oct-89 | No Product | 6.78 | 0.00 | No Product | 7.65 | -0.46 |
| | | 20-Dec-89 | No Product | 7.32 | 0.00 | No Product | 7.11 | -0.54 |
| | | 20-Mar-90 | No Product | 6.76 | 0.00 | No Product | 7.67 | 0.56 |
| | | 11-May-90 | 6.65 | 6.66 | 0.01 | 7.78 | 7.78 | 0.11 |
| | | 20-Jul-90 | 6.72 | 6.74 | 0.02 | 7.69 | 7.70 | -0.07 |
| | | 12-Nov-90 | Not Measured | 6.75 | -- | Product | -7.70 | -0.00 |
| | | 21-Nov-90 | 6.97 | 7.00 | 0.03 | 7.46 | 7.45 | -0.25 |
| | | 07-Feb-91 | 6.86 | 6.88 | 0.02 | 7.57 | 7.56 | 0.11 |
| | | 08-May-91 | Not Measurable | 6.92 | * | Product | 7.51 | -0.05 |
| | | 19-Nov-92 | 7.23 | 7.26 | 0.03 | Product | 7.19 | 0.32 |
| | | MW-3 | 15.90 | 03-Aug-89 | No Product | 4.06 | 0.00 | No Product |
| 21-Sep-89 | No Product | | | 3.77 | 0.00 | No Product | 12.13 | 0.29 |
| 20-Oct-89 | No Product | | | 4.49 | 0.00 | No Product | 11.41 | -0.72 |
| 20-Dec-89 | No Product | | | 4.32 | 0.00 | No Product | 11.58 | 0.17 |
| 20-Mar-90 | No Product | | | 3.78 | 0.00 | No Product | 12.12 | 0.54 |
| 20-Jul-90 | No Product | | | 3.73 | 0.00 | No Product | 12.17 | 0.05 |
| 12-Nov-90 | No Product | | | 3.89 | 0.00 | No Product | 12.01 | -0.16 |
| 07-Feb-91 | No Product | | | 3.92 | 0.00 | No Product | 11.98 | -0.03 |
| 08-May-91 | No Product | | | 3.96 | 0.00 | No Product | 11.94 | -0.04 |
| 19-Nov-92 | No Product | | | 4.15 | 0.00 | No Product | 11.75 | -0.19 |
| MW-4 | 14.04 | 03-Aug-89 | No Product | 7.10 | 0.00 | No Product | 6.94 | -- |
| | | 21-Sep-89 | No Product | 6.90 | 0.00 | No Product | 7.14 | 0.20 |
| | | 20-Oct-89 | No Product | 6.95 | 0.00 | No Product | 7.09 | -0.05 |
| | | 20-Dec-89 | No Product | 7.24 | 0.00 | No Product | 6.80 | -0.29 |
| | | 20-Mar-90 | No Product | 6.94 | 0.00 | No Product | 7.10 | 0.30 |
| | | 20-Jul-90 | No Product | 6.94 | 0.00 | No Product | 7.10 | 0.00 |
| | | 12-Nov-90 | No Product | 7.13 | 0.00 | No Product | 6.91 | -0.19 |
| | | 07-Feb-91 | No Product | 6.94 | 0.00 | No Product | 7.10 | 0.19 |
| | | 08-May-91 | No Product | 7.15 | 0.00 | No Product | 6.89 | -0.21 |
| 19-Nov-92 | No Product | 7.45 | 0.00 | No Product | 6.59 | -0.30 | | |
| MW-5 | 15.21 | 03-Aug-89 | No Product | 4.35 | 0.00 | No Product | 10.86 | -- |
| | | 21-Sep-89 | No Product | 4.38 | 0.00 | No Product | 10.83 | -0.03 |
| | | 20-Oct-89 | No Product | 4.37 | 0.00 | No Product | 10.84 | 0.01 |
| | | 20-Dec-89 | No Product | 4.48 | 0.00 | No Product | 10.73 | -0.11 |
| | | 20-Mar-90 | No Product | 4.07 | 0.00 | No Product | 11.14 | 0.41 |
| | | 20-Jul-90 | No Product | 4.12 | 0.00 | No Product | 11.09 | -0.05 |
| | | 12-Nov-90 | No Product | 4.36 | 0.00 | No Product | 10.85 | -0.24 |
| | | 07-Feb-91 | No Product | 4.44 | 0.00 | No Product | 10.77 | -0.08 |
| | | 08-May-91 | No Product | 3.90 | 0.00 | No Product | 11.31 | 0.54 |
| 19-Nov-92 | No Product | 4.31 | 0.00 | No Product | 10.90 | -0.41 | | |

MSL = Mean Sea Level.

- = Because product thickness was not measured, an estimate was made to account for the effect of product on the water level.

* Product not measured using oil-interface probe; however, globules of product (0.01 to 0.02 foot in diameter) were observed using a clear Lucite bailer.

**Table 2. Chemical Concentrations in Groundwater
November 1992 Groundwater Monitoring Report
1600 63rd Street, Emeryville**

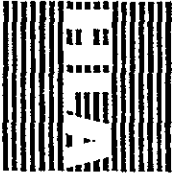
| Well Number | Date Sampled | Benzene EPA 8240 or 602 | Toluene EPA 8240 or 602 | Ethyl- benzene EPA 8240 or 602 | Xylenes EPA 8240 or 602/8020 | TPH as gasoline EPA 8015/ 3510-5030 | TPH as diesel EPA 8015/ 3510 | TPH as motor oil EPA 8015/ 3510 | TPH as kerosene EPA 8015/ 3510 | Endrin Aldehyde EPA 8080/ 608 |
|---------------|--------------|-------------------------------|-------------------------------|---|------------------------------------|--|---------------------------------------|--|---|--|
| MW-1 | 18-Jun-89 | <0.001 | <0.001 | <0.001 | <0.001 | <0.5 | <0.5 | NT | <0.5 | NT |
| | 21-Sep-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.5 | <0.5 | NT | <0.5 | 0.0001 |
| | 20-Dec-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Mar-90 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Jul-90 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | 0.17 | <0.5 | <0.05 | <0.00025 |
| | 12-Nov-90 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | 0.16 | <0.5 | NT | <0.00005 |
| | 07-Feb-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | 0.20 | <0.5 | NT | <0.00005 |
| | 08-May-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | 0.7 | <0.5 | <0.005 | <0.00005 |
| | 19-Nov-92 | <0.0003 | <0.0003 | <0.0003 | <0.0003 | <0.05 | <0.05 | <1.0 | <0.05 | <0.00001 |
| MW-2 | 25-Jun-89 | <0.005 | <0.005 | <0.005 | <0.005 | 0.3 | <0.5 | NT | <0.5 | NT |
| | 21-Sep-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.5 | 1.0 | NT | <0.5 | <0.00005 |
| | 20-Dec-89 | <0.005 | <0.005 | <0.005 | <0.005 | 0.53 | <0.5 | NT | 2.2 | <0.00005 |
| | 20-Mar-90 | <0.005 | <0.005 | <0.005 | <0.005 | 0.42 | 49 | NT | <1.0 | <0.00005 |
| | 11-May-90 | <0.005 | <0.005 | <0.005 | <0.005 | 1.2 | 8.4 | NT | <0.5 | NT |
| | 11-May-90 D* | <0.01 | <0.01 | <0.01 | <0.01 | <0.05 | <2.5 | NT | <2.5 | NT |
| | 20-Jul-90 | <0.005 | <0.005 | <0.005 | 0.011 | 3.9 | 27 | <0.5 | <1.0 | <0.0001 |
| | 20-Jul-90 D | <0.005 | <0.0025 | <0.0025 | 0.0033 | 2.3 | 30 | <0.5 | <1.0 | <0.0001 |
| | 12-Nov-90 | <0.005 | <0.0005 | <0.0005 | <0.0005 | 380 | 61 | <0.5 | NT | <0.00005 |
| | 12-Nov-90 D | <0.005 | 0.0009 | 0.001 | 0.0079 | 7 | 35 | 21 | NT | <0.00005 |
| | 07-Feb-91 | <0.005 | <0.0005 | <0.0005 | <0.0005 | 11 | 41 | 31 | NT | <0.00005 |
| | 07-Feb-91 D | <0.005 | <0.0005 | <0.0005 | 0.043 | 13 | 27 | 21 | NT | <0.00005 |
| | 08-May-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | 88 | 43 | 30 | <0.05 | <0.00005 |
| | 08-May-91 D | <0.005 | <0.0005 | <0.0005 | <0.005 | 150 | 26 | 18 | <0.05 | <0.00005 |
| | 19-Nov-92 | <0.0003 | 0.0019 | <0.0003 | 0.0037 | 0.72 | 11 | 29 | 14 | <0.0001 |
| | 19-Nov-92 D | <0.0003 | 0.0014 | <0.0003 | 0.0015 | 0.59 | 22 | 56 | 27 | <0.0001 |
| MW-3 | 18-Jun-89 | <0.001 | <0.001 | <0.001 | <0.001 | <0.5 | <0.5 | NT | <0.5 | NT |
| | 21-Sep-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.5 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Dec-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Mar-90 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Jul-90 | <0.005 | <0.0005 | <0.0005 | <0.005 | 0.11 | <0.05 | <0.5 | <0.05 | <0.00005 |
| | 12-Nov-90 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | NT | <0.00005 |
| | 07-Feb-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | 0.12 | <0.5 | NT | <0.00005 |
| | 08-May-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | <0.05 | <0.00005 |
| | 19-Nov-92 | <0.0003 | <0.0003 | <0.0003 | <0.0003 | <0.05 | <0.05 | <1.0 | <0.05 | <0.00001 |
| MW-4 | 25-Jun-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | NT |
| | 21-Sep-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.5 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Dec-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Dec-89 D | <0.005 | <0.005 | <0.005 | <0.005 | NT | NT | NT | NT | NT |
| | 20-Mar-90 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Jul-90 | <0.005 | <0.0005 | <0.0005 | <0.005 | 0.12 | <0.05 | <0.5 | <0.05 | <0.00005 |
| | 12-Nov-90 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | NT | <0.00005 |
| | 07-Feb-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | NT | <0.00005 |
| | 08-May-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | <0.05 | <0.00005 |
| | 19-Nov-92 | <0.0003 | <0.0003 | <0.0003 | <0.0003 | <0.05 | <0.05 | <1.0 | <0.05 | <0.00001 |
| MW-5 | 30-Jun-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | NT |
| | 21-Sep-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.5 | <0.5 | NT | <0.5 | <0.00015 |
| | 20-Dec-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Mar-90 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | <0.00005 |
| | 20-Jul-90 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | <0.05 | <0.00005 |
| | 12-Nov-90 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | NT | <0.00005 |
| | 07-Feb-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | NT | <0.00005 |
| | 08-May-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | <0.05 | <0.00005 |
| | 19-Nov-92 | <0.0003 | <0.0003 | <0.0003 | <0.0003 | <0.05 | <0.05 | <1.0 | <0.05 | <0.00001 |
| Blank Samples | | | | | | | | | | |
| FB | 30-Jun-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.5 | NT | <0.5 | NT |
| FB | 21-Sep-89 | <0.005 | <0.005 | <0.005 | <0.005 | <0.5 | <0.5 | NT | <0.5 | <0.00005 |
| TB | 20-Mar-90 | <0.005 | <0.005 | <0.005 | <0.005 | NT | NT | NT | NT | NT |
| TB | 20-Jul-90 | <0.005 | <0.0006 | <0.0005 | <0.005 | <0.05 | NT | NT | NT | NT |
| TB | 12-Nov-90 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | NT | <0.00005 |
| TB | 07-Feb-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | NT | <0.00005 |
| TB | 08-May-91 | <0.005 | <0.0005 | <0.0005 | <0.005 | <0.05 | <0.05 | <0.5 | <0.05 | <0.00005 |

**Table 2. Chemical Concentrations in Groundwater
November 1992 Groundwater Monitoring Report
1600 63rd Street, Emeryville**

| Well Number | Date Sampled | Heptachlor EPA 8080 or 608 | 4,4'-DDD EPA 8080 or 608 | Gamma-BHC EPA 8080 or 608 | Fluorene EPA 8270 /8310 | Bis (2-ethylhexyl) phthalate EPA 8270 | 2-Methyl naphthalene EPA 8270 | Phenanthrene EPA 8270/8310 | Acetone EPA 8240 | PCB Aroclor 1260 EPA 8080/608 |
|---------------|--------------|----------------------------|--------------------------|---------------------------|-------------------------|---------------------------------------|-------------------------------|----------------------------|------------------|-------------------------------|
| MW-1 | 18-Jun-89 | NT | NT | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | NT |
| | 21-Sep-89 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Dec-89 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Mar-90 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Jul-90 | <0.00025 | <0.00025 | <0.00010 | NT | NT | NT | NT | NT | NT |
| | 12-Nov-90 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.00005 |
| | 07-Feb-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.00005 |
| | 08-May-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| | 19-Nov-92 | <0.00001 | <0.00001 | <0.00001 | NT | NT | NT | NT | NT | <0.0005 |
| | MW-2 | 25-Jun-89 | <0.00005 | NT | <0.00005 | trace | <0.005 | <0.005 | <0.005 | <0.01 |
| 21-Sep-89 | | <0.00016 | 0.00015 | <0.00005 | 0.006 | 0.005 | 0.0061 | <0.005 | <0.01 | <0.0005 |
| 20-Dec-89 | | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | 0.012 | <0.005 | <0.01 | <0.0005 |
| 20-Mar-90 | | <0.00005 | <0.00005 | 0.00035 | 0.0061 | <0.005 | 0.018 | 0.0055 | 0.044 | <0.0005 |
| 11-May-90 | | NT | NT | NT | NT | NT | NT | NT | <0.01 | NT |
| 11-May-90 D | | NT | NT | NT | NT | NT | NT | NT | <0.02 | NT |
| 20-Jul-90 | | <0.00010 | <0.00010 | <0.00004 | NT | NT | NT | NT | NT | NT |
| 20-Jul-90 D | | <0.00010 | <0.00010 | <0.00004 | NT | NT | NT | NT | NT | <0.0005 |
| 12-Nov-90 | | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| 12-Nov-90 D | | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| 07-Feb-91 | | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| 07-Feb-91 D | | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| 08-May-91 | | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| 08-May-91 D | | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| 19-Nov-92 | <0.0001 | <0.0001 | <0.0001 | 0.030 | NT | NT | 0.040 | -- | <0.005 | |
| 19-Nov-92 D | <0.0001 | <0.0001 | <0.0001 | 0.030 | NT | NT | 0.050 | -- | <0.005 | |
| MW-3 | 18-Jun-89 | NT | NT | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | NT |
| | 21-Sep-89 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Dec-89 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Mar-90 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Jul-90 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | NT |
| | 12-Nov-90 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| | 07-Feb-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| | 08-May-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| | 19-Nov-92 | <0.00001 | 0.00003 | <0.00001 | NT | NT | NT | NT | NT | <0.0005 |
| MW-4 | 25-Jun-89 | <0.00005 | NT | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 21-Sep-89 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Dec-89 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Dec-89 D | NT | NT | NT | NT | NT | NT | NT | <0.01 | NT |
| | 20-Mar-90 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Jul-90 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | NT |
| | 12-Nov-90 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| | 07-Feb-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| | 08-May-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| 19-Nov-92 | <0.00001 | <0.00001 | <0.00001 | NT | NT | NT | NT | NT | <0.0005 | |
| MW-5 | 30-Jun-89 | NT | NT | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | NT |
| | 21-Sep-89 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | 0.00090 |
| | 20-Dec-89 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Mar-90 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.0005 |
| | 20-Jul-90 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | NT |
| | 12-Nov-90 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| | 07-Feb-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| | 08-May-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| | 19-Nov-92 | <0.00001 | <0.00001 | <0.00001 | NT | NT | NT | NT | NT | <0.0005 |
| Blank Samples | | | | | | | | | | |
| FB | 30-Jun-89 | NT | NT | NT | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | NT |
| FB | 21-Sep-89 | <0.00005 | <0.00005 | <0.00005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.00050 |
| TB | 20-Mar-90 | NT | NT | NT | NT | NT | NT | NT | <0.01 | NT |
| TB | 20-Jul-90 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| TB | 12-Nov-90 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| TB | 07-Feb-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |
| TB | 08-May-91 | <0.00005 | <0.00005 | <0.00002 | NT | NT | NT | NT | NT | <0.0005 |

Concentrations expressed as milligrams per liter (mg/l), which is essentially equivalent to parts per million (ppm). The less than symbol indicates a result below the reporting limit. Where they are analyzed, unlisted EPA Test Method 602, 8015, 8080, 8240, 8270, and 8310 parameters were not detected.

* Sample contained 15 ppm of unknown hydrocarbons in about the C-7 to C-23 range and eight tentatively identified organic compounds.
 NT = Not tested.
 FB = Field blank.
 D = Duplicate samples.
 TB = Trip blank.



Harding Lawson Associates
Engineering and
Environmental Services

DRAWN
CVDC

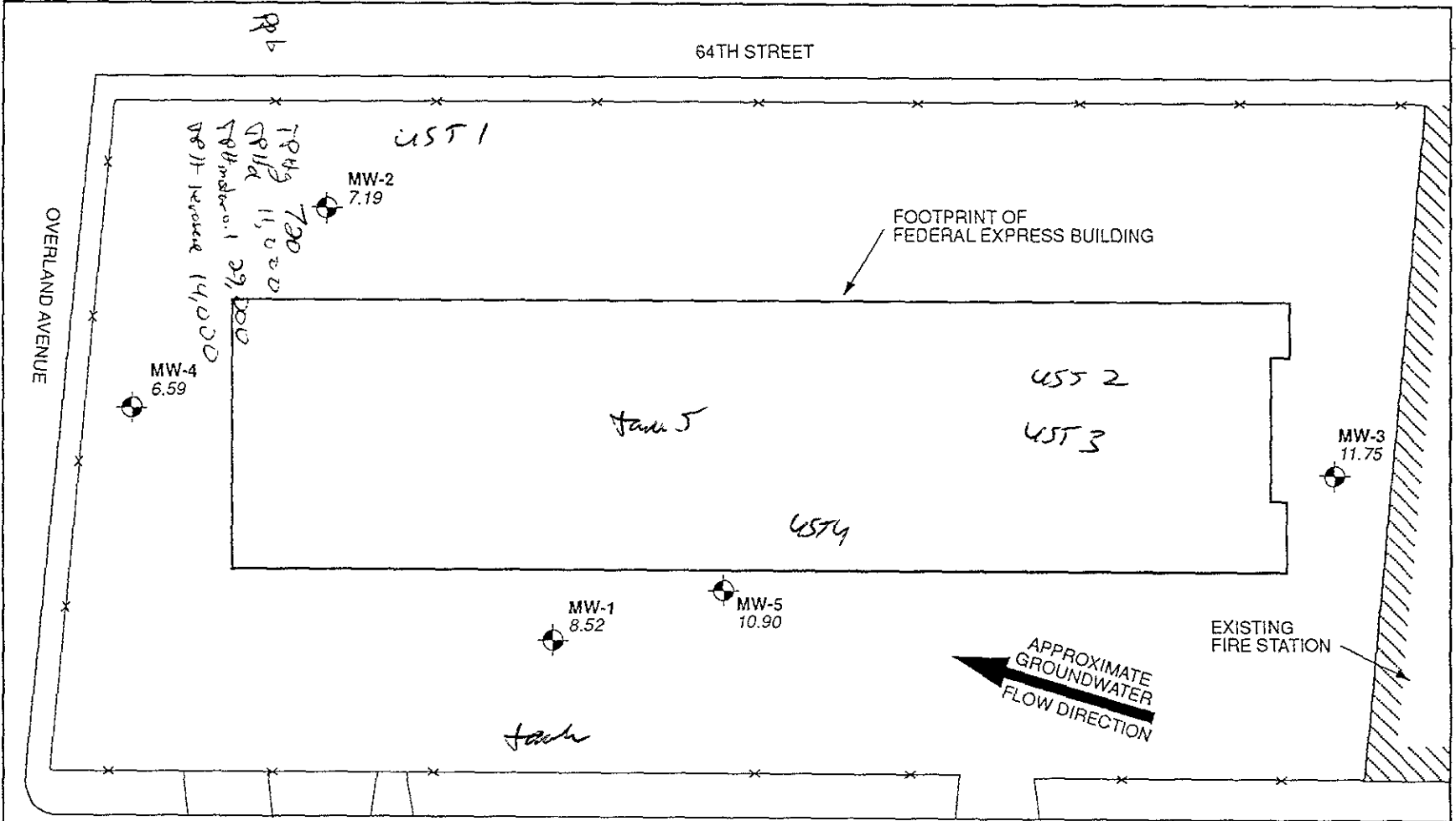
JOB NUMBER
20968 001

Site Map
1600 63rd Street
Emeryville, California

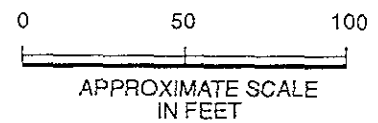
APPROVED
RW

DATE
1/93

REVISED DATE



- EXPLANATION**
- MW-1 HLA Monitoring Well
 - 8.52 Groundwater elevation measured on November 19, 1992, in feet above mean sea level



01079m
PLATE

1



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

DEC 10 1992

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55803
CLIENT: HARDING LAWSON ASSOCIATES
CLIENT JOB NO.: 20968-001

DATE RECEIVED: 11/20/92
DATE REPORTED: 12/04/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 5030 and 8015

| LAB # | Sample Identification | Concentration (ug/L) Gasoline Range |
|-------|-----------------------|--|
| 1 | 92111901 | ND<50 |
| 2 | 92111902 | ND<50 |
| 3 | 92111903 | ND<50 |
| 4 | 92111904 | 720 |
| 5 | 92111905 | 590 |
| 6 | 92111906 | ND<50 |

ug/L - parts per billion (ppb)

Method Detection Limit for Gasoline in Water: 50 ug/L

QAQC Summary:

Daily Standard run at 2mg/L: %Diff Gasoline = <15
MS/MSD Recovery = 91%: Duplicate RPD = 9%

Richard Srna, Ph.D.

Oliver A. Novak (for)
Laboratory Manager



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55803
CLIENT: HARDING LAWSON ASSOCIATES
CLIENT JOB NO.: 20968-001

DATE RECEIVED: 11/20/92
DATE REPORTED: 12/04/92

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

| LAB # | Sample Identification | Concentration (ug/L) | | | |
|-------|-----------------------|----------------------|---------|---------------|---------|
| | | Benzene | Toluene | Ethyl Benzene | Xylenes |
| 1 | 92111901 | ND<0.3 | ND<0.3 | ND<0.3 | ND<0.3 |
| 2 | 92111902 | ND<0.3 | ND<0.3 | ND<0.3 | ND<0.3 |
| 3 | 92111903 | ND<0.3 | ND<0.3 | ND<0.3 | ND<0.3 |
| 4 | 92111904 | ND<0.3 | 1.9 | ND<0.3 | 3.7 |
| 5 | 92111905 | ND<0.3 | 1.4 | ND<0.3 | 1.5 |
| 6 | 92111906 | ND<0.3 | ND<0.3 | ND<0.3 | ND<0.3 |

ug/L - parts per billion (ppb)

Method Detection Limit in Water: 0.3 ug/L

QAQC Summary:

Daily Standard run at 20ug/L: %Diff 8020 = <15%
MS/MSD Average Recovery = 94%: Duplicate RPD = 9%

Richard Srna, Ph.D.

Richard Srna
Laboratory Manager



Superior Precision Analytical, Inc.

1555 Burke, Unit I ▪ San Francisco, California 94124 ▪ (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55803
CLIENT: HARDING LAWSON ASSOCIATES
CLIENT JOB NO.: 20968-001

DATE RECEIVED: 11/20/92
DATE REPORTED: 12/04/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 8015

| LAB # | Sample Identification | Concentration (ug/L) | | |
|-------|-----------------------|----------------------|----------|-----------|
| | | Diesel Range | Kerosene | Motor Oil |
| 1 | 92111901 | ND<50 | ND<50 | ND<1000 |
| 2 | 92111902 | ND<50 | ND<50 | ND<1000 |
| 3 | 92111903 | ND<50 | ND<50 | ND<1000 |
| 4 | 92111904 | 11000 | 14000 | 29000 |
| 5 | 92111905 | 22000 | 27000 | 56000 |
| 6 | 92111906 | ND<50 | ND<50 | ND<1000 |

ug/L - parts per billion (ppb)

Minimum Detection Limit for Diesel in Water: 50ug/L
Minimum Detection Limit for Kerosene in Water: 50ug/L
Minimum Detection Limit for Motor Oil in Water: 1000ug/L
QAQC Summary:

Daily Standard run at 200mg/L: %DIFF Diesel = <15%
MS/MSD Average Recovery = 97%: Duplicate RPD = 3%

Richard Srna, Ph.D.

Quinn A. Nwogu
Laboratory Director



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55803
CLIENT: HARDING LAWSON ASSOC.
CLIENT PROJECT NO.: 20968-001

DATE RECEIVED: 11/20/92
DATE REPORTED: 12/04/92

Following is a list of Cross referenced Lab Numbers and Sample I.D.'s for referring to the following reports.

| <u>Superior Lab Number</u> | <u>Subbed Lab Number</u> | <u>Customer Sample Identification</u> |
|--------------------------------|------------------------------|---------------------------------------|
| 55803-1 | 9211286-01A | 92111901 |
| 55803-2 | 9211286-02A | 92111902 |
| 55803-3 | 9211286-03A | 92111903 |
| 55803-4 | 9211286-04A | 92111904 |
| 55803-5 | 9211286-05A | 92111905 |
| 55803-6 | 9211286-06A | 92111906 |

Subbed to: CLAYTON ENVIRONMENTAL CONSULTANTS DOHS#1196.



Harding Lawson Associates
 200 Rush Landing Road
 P.O. Box 6107
 Novato, California 94948
 415/892-0821
 Telecopy: 415/892-1586

CHAIN OF CUSTODY FORM

55803

Lab: Superior

Job Number: 20968 - 001
 Name/Location: Wareham
 Project Manager: Rick McCartney

Samplers: David MEvans
 Recorder: David MEvans
 (Signature Required)

| SOURCE CODE | MATRIX | | | | CONTAINERS & PRESERV. | | | | SAMPLE NUMBER OR LAB NUMBER | | | DATE | | | | STATION DESCRIPTION/NOTES |
|-------------|--------|----------|------|-----|-----------------------|--------------------------------|------------------|-----|-----------------------------|------|-----|------|----|----|------|---------------------------|
| | Water | Sediment | Soil | Oil | Unpres. | H ₂ SO ₄ | HNO ₃ | HCL | Yr | Wk | Seq | Yr | Mo | Dy | Time | |
| | | | | | | | | | | | | | | | | |
| 23 | X | | | | 4 | | 6 | 92 | 11 | 190 | 92 | 11 | 19 | 09 | 30 | |
| 23 | X | | | | 4 | | 6 | 92 | 11 | 1902 | 92 | 11 | 19 | 11 | 30 | |
| 23 | X | | | | 4 | | 6 | 92 | 11 | 1903 | 92 | 11 | 19 | 12 | 15 | |
| 23 | X | | | | 4 | | 6 | 92 | 11 | 1904 | 92 | 11 | 19 | 14 | 30 | |
| 23 | X | | | | 4 | | 6 | 92 | 11 | 1905 | 92 | 11 | 19 | 15 | 00 | |
| 23 | X | | | | 4 | | 6 | 92 | 11 | 1906 | 92 | 11 | 19 | 15 | 30 | |

| ANALYSIS REQUESTED | | | | | | | | | | | |
|--------------------|--------------|--------------|--------------|------------|---------------|-------------------|----------------------------|----------------------------|-------------------|---------------|------------------|
| EPA 601/8010 | EPA 602/8020 | EPA 624/8240 | EPA 625/8270 | ICP METALS | EPA 8015M/TPH | TPH as s&s saline | TPH as dissolved inorganic | TPH as dissolved inorganic | EPA 8015 EPA 8020 | BTEX EPA 8020 | Pesticide + PCBs |
| | | | | | | X | X | X | X | X | X |
| | | | | | | X | X | X | X | X | X |
| | | | | | | X | X | X | X | X | X |
| | | | | | | X | X | X | X | X | X |
| | | | | | | X | X | X | X | X | X |
| | | | | | | X | X | X | X | X | X |

| LAB NUMBER | | | DEPTH IN FEET | COL MTD CD | QA CODE | MISCELLANEOUS |
|------------------------|----|-----|---------------|------------|---------|---------------|
| Yr | Wk | Seq | | | | |
| | | | | | | 2 week TAT |
| Please initial: | | | | | | |
| Samples stored in ice | | | | | | |
| Appropriate containers | | | | | | |
| Samples preserved | | | | | | |
| VDA's without results | | | | | | |
| Comments: | | | | | | |

| CHAIN OF CUSTODY RECORD | | |
|--|--|--|
| RELINQUISHED BY: (Signature) <u>David MEvans</u> | RECEIVED BY: (Signature) <u>Paul Lobell</u> | DATE/TIME <u>11/20/92 10:12</u> |
| RELINQUISHED BY: (Signature) <u>Rick McCartney</u> | RECEIVED BY: (Signature) <u>Paul Lobell</u> | DATE/TIME <u>11/20/92 10:15</u> |
| RELINQUISHED BY: (Signature) <u>11/20/92</u> <u>Paul Lobell</u> | RECEIVED BY: (Signature) | DATE/TIME |
| RELINQUISHED BY: (Signature) | RECEIVED BY: (Signature) | DATE/TIME |
| DISPATCHED BY: (Signature) | DATE/TIME | RECEIVED FOR LAB BY: (Signature) <u>Paul Lobell</u> <u>11/20/92 11:40</u> |
| METHOD OF SHIPMENT <u>All samples in cooler on ice</u> | | |

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

December 9, 1992

Ms. Cecilia Joaquin
SUPERIOR ANALYTICAL LABORATORY
1555 Burke Street, Unit 1
San Francisco, CA 94124

Client Ref. 55803
Clayton Project No. 92112.86

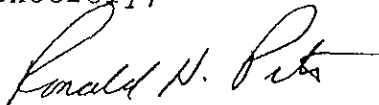
Dear Ms. Joaquin:

Attached is our analytical laboratory report for the samples received on November 24, 1992. Results for EPA 8080 were sent to you by facsimile on December 3, 1992. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,



Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/tb
Attachments

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-1 | Date Sampled: | -- |
| Lab Number: | 9211286-01A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--|------------|-------------------------|---------------------------------|
| <u>Organochlorine Pesticides</u> | | | |
| alpha-BHC | 319-84-6 | ND | 0.01 |
| gamma-BHC (Lindane) | 58-89-9 | ND | 0.01 |
| beta-BHC | 319-85-7 | ND | 0.01 |
| Heptachlor | 76-44-8 | ND | 0.01 |
| delta-BHC | 319-86-8 | ND | 0.01 |
| Aldrin | 309-00-2 | ND | 0.01 |
| Heptachlor epoxide | 1024-57-3 | ND | 0.01 |
| Endosulfan I | 959-98-8 | ND | 0.01 |
| 4,4'-DDE | 72-55-9 | ND | 0.01 |
| Dieldrin | 60-57-1 | ND | 0.01 |
| Endrin | 72-20-8 | ND | 0.01 |
| 4,4'-DDD | 72-54-8 | ND | 0.01 |
| Endosulfan II | 33212-65-9 | ND | 0.01 |
| 4,4'-DDT | 50-29-3 | ND | 0.01 |
| Endrin aldehyde | 7421-93-4 | ND | 0.01 |
| Endosulfan sulfate | 1031-07-8 | ND | 0.01 |
| Methoxychlor | 72-43-5 | ND | 0.05 |
| Chlordane | 57-74-9 | ND | 0.05 |
| Toxaphene | 8001-35-2 | ND | 1 |
| <u>Polychlorinated Biphenyls (PCB's)</u> | | | |
| Aroclor 1016 | 12674-11-2 | ND | 0.5 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-1 | Date Sampled: | -- |
| Lab Number: | 9211286-01A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|---------|-------|-------------------------|---------------------------------|
|---------|-------|-------------------------|---------------------------------|

Polychlorinated Biphenyls (PCB's) (continued)

| | | | |
|--------------|------------|----|-----|
| Aroclor 1221 | 1104-28-2 | ND | 0.5 |
| Aroclor 1232 | 11141-16-5 | ND | 0.5 |
| Aroclor 1242 | 53469-21-9 | ND | 0.5 |
| Aroclor 1248 | 12672-29-6 | ND | 0.5 |
| Aroclor 1254 | 11097-69-1 | ND | 0.5 |
| Aroclor 1260 | 11096-82-5 | ND | 0.5 |

| <u>Surrogates</u> | | <u>Recovery (%)</u> | <u>QC Limits (%)</u> | |
|----------------------|-----------|---------------------|----------------------|-----|
| | | | LCL | UCL |
| Tetrachloro-m-xylene | 877-09-8 | 107 | 24 | 150 |
| Dibutylchloroendate | 1770-80-5 | 98 | 24 | 154 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-2 | Date Sampled: | -- |
| Lab Number: | 9211286-02A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|----------------------------------|------------|----------------------|---------------------------|
| <u>Organochlorine Pesticides</u> | | | |
| alpha-BHC | 319-84-6 | ND | 0.01 |
| gamma-BHC (Lindane) | 58-89-9 | ND | 0.01 |
| beta-BHC | 319-85-7 | ND | 0.01 |
| Heptachlor | 76-44-8 | ND | 0.01 |
| delta-BHC | 319-86-8 | ND | 0.01 |
| Aldrin | 309-00-2 | ND | 0.01 |
| Heptachlor epoxide | 1024-57-3 | ND | 0.01 |
| Endosulfan I | 959-98-8 | ND | 0.01 |
| 4,4'-DDE | 72-55-9 | ND | 0.01 |
| Dieldrin | 60-57-1 | ND | 0.01 |
| Endrin | 72-20-8 | ND | 0.01 |
| 4,4'-DDD | 72-54-8 | ND | 0.01 |
| Endosulfan II | 33212-65-9 | ND | 0.01 |
| 4,4'-DDT | 50-29-3 | ND | 0.01 |
| Endrin aldehyde | 7421-93-4 | ND | 0.01 |
| Endosulfan sulfate | 1031-07-8 | ND | 0.01 |
| Methoxychlor | 72-43-5 | ND | 0.05 |
| Chlordane | 57-74-9 | ND | 0.05 |
| Toxaphene | 8001-35-2 | ND | 1 |

Polychlorinated Biphenyls (PCB's)

| | | | |
|--------------|------------|----|-----|
| Aroclor 1016 | 12674-11-2 | ND | 0.5 |
|--------------|------------|----|-----|

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-2 | Date Sampled: | -- |
| Lab Number: | 9211286-02A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--|------------|----------------------|---------------------------------|
| <u>Polychlorinated Biphenyls (PCB's) (continued)</u> | | | |
| Aroclor 1221 | 1104-28-2 | ND | 0.5 |
| Aroclor 1232 | 11141-16-5 | ND | 0.5 |
| Aroclor 1242 | 53469-21-9 | ND | 0.5 |
| Aroclor 1248 | 12672-29-6 | ND | 0.5 |
| Aroclor 1254 | 11097-69-1 | ND | 0.5 |
| Aroclor 1260 | 11096-82-5 | ND | 0.5 |
| <u>Surrogates</u> | | <u>Recovery (%)</u> | <u>QC Limits (%)</u> LCL UCL |
| Tetrachloro-m-xylene | 877-09-8 | 116 | 24 - 150 |
| Dibutylchlorodate | 1770-80-5 | 93 | 24 - 154 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-3 | Date Sampled: | -- |
| Lab Number: | 9211286-03A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|----------------------------------|------------|----------------------|---------------------------|
| <u>Organochlorine Pesticides</u> | | | |
| alpha-BHC | 319-84-6 | ND | 0.01 |
| gamma-BHC (Lindane) | 58-89-9 | ND | 0.01 |
| beta-BHC | 319-85-7 | ND | 0.01 |
| Heptachlor | 76-44-8 | ND | 0.01 |
| delta-BHC | 319-86-8 | ND | 0.01 |
| Aldrin | 309-00-2 | ND | 0.01 |
| Heptachlor epoxide | 1024-57-3 | ND | 0.01 |
| Endosulfan I | 959-98-8 | ND | 0.01 |
| 4,4'-DDE | 72-55-9 | ND | 0.01 |
| Dieldrin | 60-57-1 | ND | 0.01 |
| Endrin | 72-20-8 | ND | 0.01 |
| 4,4'-DDD | 72-54-8 | ND | 0.01 |
| Endosulfan II | 33212-65-9 | ND | 0.01 |
| 4,4'-DDT | 50-29-3 | 0.03 | 0.01 |
| Endrin aldehyde | 7421-93-4 | ND | 0.01 |
| Endosulfan sulfate | 1031-07-8 | ND | 0.01 |
| Methoxychlor | 72-43-5 | ND | 0.05 |
| Chlordane | 57-74-9 | ND | 0.05 |
| Toxaphene | 8001-35-2 | ND | 1 |

Polychlorinated Biphenyls (PCB's)

| | | | |
|--------------|------------|----|-----|
| Aroclor 1016 | 12674-11-2 | ND | 0.5 |
|--------------|------------|----|-----|

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-3 | Date Sampled: | -- |
| Lab Number: | 9211286-03A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--|------------|-------------------------|---------------------------------|
| <u>Polychlorinated Biphenyls (PCB's) (continued)</u> | | | |
| Aroclor 1221 | 1104-28-2 | ND | 0.5 |
| Aroclor 1232 | 11141-16-5 | ND | 0.5 |
| Aroclor 1242 | 53469-21-9 | ND | 0.5 |
| Aroclor 1248 | 12672-29-6 | ND | 0.5 |
| Aroclor 1254 | 11097-69-1 | ND | 0.5 |
| Aroclor 1260 | 11096-82-5 | ND | 0.5 |

| <u>Surrogates</u> | | <u>Recovery (%)</u> | <u>QC Limits (%)</u> | |
|----------------------|-----------|---------------------|----------------------|-----|
| | | | LCL | UCL |
| Tetrachloro-m-xylene | 877-09-8 | 116 | 24 | 150 |
| Dibutylchloroendate | 1770-80-5 | 95 | 24 | 154 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-4 | Date Sampled: | -- |
| Lab Number: | 9211286-04A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--|------------|-------------------------|---------------------------------|
| <u>Organochlorine Pesticides</u> | | | |
| alpha-BHC | 319-84-6 | ND | 0.1 |
| gamma-BHC (Lindane) | 58-89-9 | ND | 0.1 |
| beta-BHC | 319-85-7 | ND | 0.1 |
| Heptachlor | 76-44-8 | ND | 0.1 |
| delta-BHC | 319-86-8 | ND | 0.1 |
| Aldrin | 309-00-2 | ND | 0.1 |
| Heptachlor epoxide | 1024-57-3 | ND | 0.1 |
| Endosulfan I | 959-98-8 | ND | 0.1 |
| 4,4'-DDE | 72-55-9 | ND | 0.1 |
| Dieldrin | 60-57-1 | ND | 0.1 |
| Endrin | 72-20-8 | ND | 0.1 |
| 4,4'-DDD | 72-54-8 | ND | 0.1 |
| Endosulfan II | 33212-65-9 | ND | 0.1 |
| 4,4'-DDT | 50-29-3 | ND | 0.1 |
| Endrin aldehyde | 7421-93-4 | ND | 0.1 |
| Endosulfan sulfate | 1031-07-8 | ND | 0.1 |
| Methoxychlor | 72-43-5 | ND | 0.5 |
| Chlordane | 57-74-9 | ND | 0.5 |
| Toxaphene | 8001-35-2 | ND | 10 |
| <u>Polychlorinated Biphenyls (PCB's)</u> | | | |
| Aroclor 1016 | 12674-11-2 | ND | 5 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-4 | Date Sampled: | -- |
| Lab Number: | 9211286-04A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--|------------|----------------------|---------------------------|
| <u>Polychlorinated Biphenyls (PCB's) (continued)</u> | | | |
| Aroclor 1221 | 1104-28-2 | ND | 5 |
| Aroclor 1232 | 11141-16-5 | ND | 5 |
| Aroclor 1242 | 53469-21-9 | ND | 5 |
| Aroclor 1248 | 12672-29-6 | ND | 5 |
| Aroclor 1254 | 11097-69-1 | ND | 5 |
| Aroclor 1260 | 11096-82-5 | ND | 5 |

| <u>Surrogates</u> | | <u>Recovery (%)</u> | <u>QC Limits (%)</u> | |
|----------------------|-----------|---------------------|----------------------|-----|
| | | | LCL | UCL |
| Tetrachloro-m-xylene | 877-09-8 | 68 | 24 | 150 |
| Dibutylchlorendate | 1770-80-5 | 61 | 24 | 154 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-5 | Date Sampled: | -- |
| Lab Number: | 9211286-05A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|----------------------------------|------------|----------------------|---------------------------|
| <u>Organochlorine Pesticides</u> | | | |
| alpha-BHC | 319-84-6 | ND | 0.1 |
| gamma-BHC (Lindane) | 58-89-9 | ND | 0.1 |
| beta-BHC | 319-85-7 | ND | 0.1 |
| Heptachlor | 76-44-8 | ND | 0.1 |
| delta-BHC | 319-86-8 | ND | 0.1 |
| Aldrin | 309-00-2 | ND | 0.1 |
| Heptachlor epoxide | 1024-57-3 | ND | 0.1 |
| Endosulfan I | 959-98-8 | ND | 0.1 |
| 4,4'-DDE | 72-55-9 | ND | 0.1 |
| Dieldrin | 60-57-1 | ND | 0.1 |
| Endrin | 72-20-8 | ND | 0.1 |
| 4,4'-DDD | 72-54-8 | ND | 0.1 |
| Endosulfan II | 33212-65-9 | ND | 0.1 |
| 4,4'-DDT | 50-29-3 | ND | 0.1 |
| Endrin aldehyde | 7421-93-4 | ND | 0.1 |
| Endosulfan sulfate | 1031-07-8 | ND | 0.1 |
| Methoxychlor | 72-43-5 | ND | 0.5 |
| Chlordane | 57-74-9 | ND | 0.5 |
| Toxaphene | 8001-35-2 | ND | 10 |

Polychlorinated Biphenyls (PCB's)

| | | | |
|--------------|------------|----|---|
| Aroclor 1016 | 12674-11-2 | ND | 5 |
|--------------|------------|----|---|

ND Not detected at or above limit of detection

-- Information not available or not applicable

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-5 | Date Sampled: | -- |
| Lab Number: | 9211286-05A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--|------------|----------------------|---------------------------|
| <u>Polychlorinated Biphenyls (PCB's) (continued)</u> | | | |
| Aroclor 1221 | 1104-28-2 | ND | 5 |
| Aroclor 1232 | 11141-16-5 | ND | 5 |
| Aroclor 1242 | 53469-21-9 | ND | 5 |
| Aroclor 1248 | 12672-29-6 | ND | 5 |
| Aroclor 1254 | 11097-69-1 | ND | 5 |
| Aroclor 1260 | 11096-82-5 | ND | 5 |

| <u>Surrogates</u> | | <u>Recovery (%)</u> | <u>QC Limits (%)</u> | |
|----------------------|-----------|---------------------|----------------------|-----|
| | | | LCL | UCL |
| Tetrachloro-m-xylene | 877-09-8 | 100 | 24 | 150 |
| Dibutylchloroendate | 1770-80-5 | 80 | 24 | 154 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-6 | Date Sampled: | -- |
| Lab Number: | 9211286-06A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|----------------------------------|------------|-------------------------|---------------------------------|
| <u>Organochlorine Pesticides</u> | | | |
| alpha-BHC | 319-84-6 | ND | 0.01 |
| gamma-BHC (Lindane) | 58-89-9 | ND | 0.01 |
| beta-BHC | 319-85-7 | ND | 0.01 |
| Heptachlor | 76-44-8 | ND | 0.01 |
| delta-BHC | 319-86-8 | ND | 0.01 |
| Aldrin | 309-00-2 | ND | 0.01 |
| Heptachlor epoxide | 1024-57-3 | ND | 0.01 |
| Endosulfan I | 959-98-8 | ND | 0.01 |
| 4,4'-DDE | 72-55-9 | ND | 0.01 |
| Dieldrin | 60-57-1 | ND | 0.01 |
| Endrin | 72-20-8 | ND | 0.01 |
| 4,4'-DDD | 72-54-8 | ND | 0.01 |
| Endosulfan II | 33212-65-9 | ND | 0.01 |
| 4,4'-DDT | 50-29-3 | ND | 0.01 |
| Endrin aldehyde | 7421-93-4 | ND | 0.01 |
| Endosulfan sulfate | 1031-07-8 | ND | 0.01 |
| Methoxychlor | 72-43-5 | ND | 0.05 |
| Chlordane | 57-74-9 | ND | 0.05 |
| Toxaphene | 8001-35-2 | ND | 1 |

Polychlorinated Biphenyls (PCB's)

| | | | |
|--------------|------------|----|-----|
| Aroclor 1016 | 12674-11-2 | ND | 0.5 |
|--------------|------------|----|-----|

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-6 | Date Sampled: | -- |
| Lab Number: | 9211286-06A | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|---------|-------|----------------------|---------------------------|
|---------|-------|----------------------|---------------------------|

Polychlorinated Biphenyls (PCB's) (continued)

| | | | |
|--------------|------------|----|-----|
| Aroclor 1221 | 1104-28-2 | ND | 0.5 |
| Aroclor 1232 | 11141-16-5 | ND | 0.5 |
| Aroclor 1242 | 53469-21-9 | ND | 0.5 |
| Aroclor 1248 | 12672-29-6 | ND | 0.5 |
| Aroclor 1254 | 11097-69-1 | ND | 0.5 |
| Aroclor 1260 | 11096-82-5 | ND | 0.5 |

| <u>Surrogates</u> | | <u>Recovery (%)</u> | <u>QC Limits (%)</u> | |
|----------------------|-----------|---------------------|----------------------|-----|
| | | | LCL | UCL |
| Tetrachloro-m-xylene | 877-09-8 | 120 | 24 | 150 |
| Dibutylchloroendate | 1770-80-5 | 90 | 24 | 154 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|--------------|-----------------|----------|
| Sample Identification: | METHOD BLANK | Date Sampled: | -- |
| Lab Number: | 9211286-07A | Date Received: | -- |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|----------------------------------|------------|----------------------|---------------------------|
| <u>Organochlorine Pesticides</u> | | | |
| alpha-BHC | 319-84-6 | ND | 0.01 |
| gamma-BHC (Lindane) | 58-89-9 | ND | 0.01 |
| beta-BHC | 319-85-7 | ND | 0.01 |
| Heptachlor | 76-44-8 | ND | 0.01 |
| delta-BHC | 319-86-8 | ND | 0.01 |
| Aldrin | 309-00-2 | ND | 0.01 |
| Heptachlor epoxide | 1024-57-3 | ND | 0.01 |
| Endosulfan I | 959-98-8 | ND | 0.01 |
| 4,4'-DDE | 72-55-9 | ND | 0.01 |
| Dieldrin | 60-57-1 | ND | 0.01 |
| Endrin | 72-20-8 | ND | 0.01 |
| 4,4'-DDD | 72-54-8 | ND | 0.01 |
| Endosulfan II | 33212-65-9 | ND | 0.01 |
| 4,4'-DDT | 50-29-3 | ND | 0.01 |
| Endrin aldehyde | 7421-93-4 | ND | 0.01 |
| Endosulfan sulfate | 1031-07-8 | ND | 0.01 |
| Methoxychlor | 72-43-5 | ND | 0.05 |
| Chlordane | 57-74-9 | ND | 0.05 |
| Toxaphene | 8001-35-2 | ND | 1 |

Polychlorinated Biphenyls (PCB's)

| | | | |
|--------------|------------|----|-----|
| Aroclor 1016 | 12674-11-2 | ND | 0.5 |
|--------------|------------|----|-----|

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|--------------|-----------------|----------|
| Sample Identification: | METHOD BLANK | Date Sampled: | -- |
| Lab Number: | 9211286-07A | Date Received: | -- |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/24/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 11/26/92 |
| Analytical Method: | EPA 8080 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|---------|-------|-------------------------|---------------------------------|
|---------|-------|-------------------------|---------------------------------|

Polychlorinated Biphenyls (PCB's) (continued)

| | | | |
|--------------|------------|----|-----|
| Aroclor 1221 | 1104-28-2 | ND | 0.5 |
| Aroclor 1232 | 11141-16-5 | ND | 0.5 |
| Aroclor 1242 | 53469-21-9 | ND | 0.5 |
| Aroclor 1248 | 12672-29-6 | ND | 0.5 |
| Aroclor 1254 | 11097-69-1 | ND | 0.5 |
| Aroclor 1260 | 11096-82-5 | ND | 0.5 |

| <u>Surrogates</u> | | <u>Recovery (%)</u> | <u>QC Limits (%)</u> | |
|----------------------|-----------|---------------------|----------------------|-----|
| | | | LCL | UCL |
| Tetrachloro-m-xylene | 877-09-8 | 52 | 24 | 150 |
| Dibutylchloroendate | 1770-80-5 | 59 | 24 | 154 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-4 | Date Sampled: | -- |
| Lab Number: | 9211286-04B | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/25/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 12/08/92 |
| Analytical Method: | EPA 8310 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--|----------|----------------------|---------------------------|
| <u>Polynuclear Aromatic Hydrocarbons</u> | | | |
| Naphthalene | 91-20-3 | ND | 50 |
| Acenaphthylene | 208-96-8 | ND | 100 |
| Acenaphthene | 83-32-9 | ND | 50 |
| Fluorene | 86-73-7 | 30 | 10 |
| Phenanthrene | 85-01-8 | 40 | 10 |
| Anthracene | 120-12-7 | ND | 10 |
| Fluoranthene | 206-44-0 | ND | 10 |
| Pyrene | 129-00-0 | ND | 10 |
| Benzo(a)anthracene | 56-55-3 | ND | 5 |
| Chrysene | 218-01-9 | ND | 5 |
| Benzo(b)fluoranthene | 205-99-2 | ND | 5 |
| Benzo(k)fluoranthene | 207-08-9 | ND | 5 |
| Benzo(a)pyrene | 50-32-8 | ND | 5 |
| Dibenzo(a,h)anthracene | 53-70-3 | ND | 5 |
| Benzo(g,h,i)perylene | 191-24-2 | ND | 10 |
| Indeno(1,2,3-c,d)pyrene | 193-39-5 | ND | 10 |

| <u>Surrogates</u> | Recovery (%) | QC Limits (%) | |
|-------------------|--------------|---------------|----------|
| | | LCL | UCL |
| Triphenylene | 217-59-4 | 118 | 30 - 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|-------------|-----------------|----------|
| Sample Identification: | 55803-5 | Date Sampled: | -- |
| Lab Number: | 9211286-05B | Date Received: | 11/24/92 |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/25/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 12/08/92 |
| Analytical Method: | EPA 8310 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--|----------|----------------------|---------------------------|
| <u>Polynuclear Aromatic Hydrocarbons</u> | | | |
| Naphthalene | 91-20-3 | ND | 50 |
| Acenaphthylene | 208-96-8 | ND | 100 |
| Acenaphthene | 83-32-9 | ND | 50 |
| Fluorene | 86-73-7 | 30 | 10 |
| Phenanthrene | 85-01-8 | 50 | 10 |
| Anthracene | 120-12-7 | ND | 10 |
| Fluoranthene | 206-44-0 | ND | 10 |
| Pyrene | 129-00-0 | ND | 10 |
| Benzo(a)anthracene | 56-55-3 | ND | 5 |
| Chrysene | 218-01-9 | ND | 5 |
| Benzo(b)fluoranthene | 205-99-2 | ND | 5 |
| Benzo(k)fluoranthene | 207-08-9 | ND | 5 |
| Benzo(a)pyrene | 50-32-8 | ND | 5 |
| Dibenzo(a,h)anthracene | 53-70-3 | ND | 5 |
| Benzo(g,h,i)perylene | 191-24-2 | ND | 10 |
| Indeno(1,2,3-c,d)pyrene | 193-39-5 | ND | 10 |

| <u>Surrogates</u> | | <u>Recovery (%)</u> | <u>QC Limits (%)</u> | |
|-------------------|----------|---------------------|----------------------|-----|
| | | | LCL | UCL |
| Triphenylene | 217-59-4 | 129 | 30 | 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Superior Analytical Laboratory

Client Reference: 55803
Clayton Project No. 92112.86

| | | | |
|------------------------|--------------|-----------------|----------|
| Sample Identification: | METHOD BLANK | Date Sampled: | -- |
| Lab Number: | 9211286-07A | Date Received: | -- |
| Sample Matrix/Media: | WATER | Date Extracted: | 11/25/92 |
| Extraction Method: | EPA 3510 | Date Analyzed: | 12/08/92 |
| Analytical Method: | EPA 8310 | | |

| Analyte | CAS # | Concentration (ug/L) | Limit of Detection (ug/L) |
|--|----------|----------------------|---------------------------|
| <u>Polynuclear Aromatic Hydrocarbons</u> | | | |
| Naphthalene | 91-20-3 | ND | 0.2 |
| Acenaphthylene | 208-96-8 | ND | 0.5 |
| Acenaphthene | 83-32-9 | ND | 0.2 |
| Fluorene | 86-73-7 | ND | 0.05 |
| Phenanthrene | 85-01-8 | ND | 0.05 |
| Anthracene | 120-12-7 | ND | 0.05 |
| Fluoranthene | 206-44-0 | ND | 0.05 |
| Pyrene | 129-00-0 | ND | 0.05 |
| Benzo(a)anthracene | 56-55-3 | ND | 0.02 |
| Chrysene | 218-01-9 | ND | 0.02 |
| Benzo(b)fluoranthene | 205-99-2 | ND | 0.02 |
| Benzo(k)fluoranthene | 207-08-9 | ND | 0.02 |
| Benzo(a)pyrene | 50-32-8 | ND | 0.02 |
| Dibenzo(a,h)anthracene | 53-70-3 | ND | 0.02 |
| Benzo(g,h,i)perylene | 191-24-2 | ND | 0.04 |
| Indeno(1,2,3-c,d)pyrene | 193-39-5 | ND | 0.04 |

| <u>Surrogates</u> | | <u>Recovery (%)</u> | <u>QC Limits (%)</u> | |
|-------------------|----------|---------------------|----------------------|-----|
| | | | LCL | UCL |
| Triphenylene | 217-59-4 | 93 | 30 | 150 |

ND Not detected at or above limit of detection
-- Information not available or not applicable

Quality Assurance Results Summary
for
Clayton Project No. 92112 86

Clayton Lab Number: 9211286-MB
Ext./Prep Method. EPA3510
Date. 11/24/92
Analyst GUD
Std. Source G920824-01W
Sample Matrix/Media. WATER

Analytical Method. EPA8080
Instrument ID. 02933
Date: 11/26/92
Time: 13 54
Analyst: LC
Units: UG/L

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---------------------|---------------|-------------|---------------------|-----------------|-------------------------------|------------------|------------------------|-----------|-----------|---------|------------|
| 4,4'-DDT | ND | 0.200 | 0.130 | 65 | 0.110 | 55 | 60 | 40 | 140 | 17 | 30 |
| ALDRIN | ND | 0.200 | 0.160 | 80 | 0.150 | 75 | 78 | 40 | 120 | 6.5 | 30 |
| DIELDRIN | ND | 0.200 | 0.170 | 85 | 0.170 | 85 | 85 | 52 | 126 | 0.0 | 30 |
| ENDRIN | ND | 0.200 | 0.180 | 90 | 0.170 | 85 | 88 | 56 | 121 | 5.7 | 30 |
| GAMMA-BHC (LINDANE) | ND | 0.200 | 0.180 | 90 | 0.180 | 90 | 90 | 56 | 123 | 0.0 | 30 |
| HEPTACLOR | ND | 0.200 | 0.170 | 85 | 0.160 | 80 | 83 | 40 | 131 | 6.1 | 30 |

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 92112.86

Clayton Lab Number: 9211286-MB
Ext /Prep Method: EPA3510
Date: 11/25/92
Analyst: HYT
Std Source: G920729-02W
Sample Matrix/Media: WATER

Analytical Method: EPA8310
Instrument ID: 07478
Date: 12/08/92
Time: 15:01
Analyst: EA
Units: UG/L

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|----------------------|---------------|-------------|---------------------|-----------------|-------------------------------|------------------|------------------------|-----------|-----------|---------|------------|
| ACENAPHTHYLENE | ND | 4.00 | 4.01 | 100 | 3.92 | 98 | 99 | 50 | 130 | 2.3 | 25 |
| ANTHRACENE | ND | 0.200 | 0.158 | 79 | 0.157 | 79 | 79 | 50 | 130 | 0.6 | 25 |
| BENZO(K)FLUORANTHENE | ND | 0.200 | 0.176 | 88 | 0.174 | 87 | 88 | 50 | 130 | 1.1 | 25 |
| INDENOPYRENE | ND | 0.200 | 0.192 | 96 | 0.183 | 92 | 94 | 45 | 125 | 4.8 | 25 |
| NAPHTHALENE | ND | 2.00 | 1.75 | 88 | 1.75 | 88 | 88 | 50 | 130 | 0.0 | 25 |
| PYRENE | ND | 0.200 | 0.207 | 104 | 0.207 | 104 | 104 | 50 | 130 | 0.0 | 25 |

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

9211286

Chain of Custody and Analysis Request

Section I

page ___ of ___

From: Superior Precision Analytical, Inc.
1555 Burke St. Unit 1
San Francisco, CA 92124
 Phone No. (415) 647-2081 Fax No. (415) 821-7123
 Contact: CECILIA JOAQUIN
 P.O. No. 55803

Turn Around Time
 (circle one)
 Same Day 72 Hrs
 24 Hrs 5 Day ~~8 Day~~
 48 Hrs 10 Day 10-Day ~~6 or 8~~



Superior Precision Analytical, Inc.
 P.O. Box 1545
 Martinez, California 94553

Work Subcontracted to: Superior Analytical

Section II: Analysis Request

| Laboratory Sample Identification | S = Soil A = Air W = Water Matrix | CAM17 | Metals: | 418.1 | 8270 | 8080 (pest. and PCB's) | 8310 PAH | Client Sample Identification | Number of Containers | Preservative (yes or no) | Sampling Remarks |
|----------------------------------|---|-------|---------|-------|------|---------------------------|-------------|------------------------------|----------------------|--------------------------|--|
| 1 55803-1 | W | | | | | X | | 9211901 | 2 | N | <input type="checkbox"/> Chevron <input checked="" type="checkbox"/> Non-Chevron ** Please Fax Results ** to Superior Lab Bill Superior |
| 2 -2 | | | | | | X | 02 | 2 | N | | |
| 3 -3 | | | | | | X | 03 | 2 | N | | |
| 4 -4 | | | | | | X | 04 | 3 | N | | |
| 5 -5 | | | | | | X | 05 | 3 | N | | |
| 6 -6 | | | | | | X | 06 | 2 | N | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |

Relinquished by Cecilia Joaquin
 Organization Superior Lab

Relinquished by _____
 Organization _____

Relinquished by _____
 Organization _____

Date/Time 11/23/92 1335
 Received by Fey Salo
 Organization C.E.C.

Date/Time _____
 Received by _____
 Organization _____

Date/Time _____
 Received by _____
 Organization _____

Lab please initial the following:
 Samples Stored in Ice OK
 Appropriate Containers OK
 Samples Preserved NA
 VOAs without Headspace OK
 Comments Rec'd 12/1