San Francisco Regional Office

6920 Koll Center Parkway
Suite 216
Pleasanton, CA 94566
925.426.2600
Fax 925.426.0106
www.claytongrp.com

Clayton GROUP SERVICES

February 21, 2000

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ENVIRONMENTAL PROTECTION

Lisa Motoyama
Project Manager
RESOURCES FOR COMMUNITY DEVELOPMENT
2131 University Avenue, # 224
Berkeley, California, 94704

Clayton Project No. 70-00399.01

Subject: Phase II Environmental Site Assessment at 6600 International Boulevard in Oakland, California

Dear Ms. Motoyama:

Clayton Group Services, Inc. (Clayton) is pleased to present our Phase II Environmental Site Assessment (ESA) of the above-referenced subject property. Three copies of the report are enclosed.

We appreciate the opportunity to be of service. If you have any questions or concerns, please contact me at 925-426-2690.

Sincerely,

John D. Glover
Supervisor
Environmental Services

JDG/jdg

Enclosure

[redacted]

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Clayton GROUP SERVICES

Phase II Environmental Site Assessment
at
6600 International Boulevard
Oakland, California
for
Resources for Community Development
Berkeley, California

Clayton Project No. 70-00399.01
February 21, 2000

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1.0 INTRODUCTION

Lisa Motoyama, Project Manager with Resources for Community Development (RCD), retained Clayton Group Services, Inc. (Clayton) to conduct a Phase II Environmental Site Assessment (ESA) of the property located at 6600 International Boulevard, Oakland, Alameda County, California (Figure 1).

1.1 PURPOSE

The objective of the Phase II ESA was to provide an independent, professional opinion regarding recognized environmental conditions, as defined by ASTM, and other environmental issues associated with the subject property. In particular, Clayton evaluated environmental concerns raised during Clayton's Phase I ESA of the subject property. The Phase I ESA report is dated February 18, 2000 (Clayton Project No. 70-00399.00).

1.2 METHODOLOGY

This assessment was performed under agreement between Clayton and RCD. Terms and conditions established during the Phase I ESA apply for this project. Resumes of environmental professionals involved with this project are provided in Appendix A. This Phase II ESA included the following components:

- Pre-field activities
- Geophysical investigation
- Subsurface investigation
- Laboratory analysis
- Data evaluation and report development

1.3 LIMITATIONS

The information and opinions rendered in this report are exclusively for use by Resources for Community Development. Clayton will not distribute or publish this report without the consent of Resources for Community Development except as required by law or court order. The information and opinions expressed in this report are given in response to a limited assignment by Resources for Community Development and should be considered and implemented only in light of that assignment. The services provided by Clayton in completing this project have been provided in a manner consistent with normal standards of the profession. No other warranty, expressed or implied, is made.

2.0 BACKGROUND

As early as 1930, the subject property was divided into two parcels, which are referred to as Parcel One and Parcel Two throughout this report. Parcel One comprised the southern half of the subject property and was developed as a gasoline and service station around 1930. At this time, Parcel One was reportedly leased to Texaco. Parcel Two comprises the northern half of the subject property and was developed as a used car sales lot with a polishing shed as early as 1947. In the mid 1960s, Parcels One and Two became contiguous when the property was redeveloped with a Texaco gas/service station; all the original structures were removed. The new station was located on Parcel Two; Parcel One became an asphalt-paved parking lot. In the late 1980's, Exxon Company U.S.A. (Exxon) operated the onsite gas/service station. In 1996, the onsite service station was closed. Since 1996, all onsite structures and asphalt surfaces have been removed.

Previous environmental work was performed at the subject property, including the removal of underground storage tanks (USTs) from Parcel Two, soil and groundwater investigations, soil removal, and groundwater remediation. During this time, a total of 14 groundwater monitor wells were installed on or in the vicinity of the subject property. Currently, six groundwater monitor wells are sampled on a quarterly basis; four wells are on Parcel Two and two wells are offsite. The Alameda County Environmental Health Department (ACEHD) provides environmental oversight at Parcel Two, and has named Exxon at the primary responsible party. Please note that to date, Parcel One has not been the subject of extensive investigation or ACEHD oversight.

Through the Phase I ESA process, Clayton determined that several additional environmental concerns, which were not previously investigated, were associated with the subject property. In general, during this Phase II ESA, Clayton evaluated concerns associated with the following:

- Possible additional USTs, other buried objects, and backfill areas at Parcel One and Parcel Two.
- Possible subsurface contamination at Parcel One.
- Possible site-wide shallow soil contamination.

3.0 PRE-FIELD ACTIVITIES

Based on the findings of Clayton's Phase I ESA, a specific Phase II ESA scope of work was prepared. In order to proceed with the subsurface investigations, Clayton obtained a drilling permit (Permit # 99WR685) on December 3, 1999 from the Alameda County Public Works Agency (ACPWA). This permit is included in Appendix B. In addition, a health and safety plan specific to the subject property was developed. Finally, as required by law, Clayton contacted Underground Service Alert (USA) prior to conducting the field activities.

4.0 FIELD ACTIVITIES

4.1 GEOPHYSICAL INVESTIGATION

On November 11, 1999, Jesse Edmands, Staff Environmental Consultant of Clayton, conducted a geophysical investigation of the subject property. NORCAL Geophysical Consultants performed the fieldwork. The purpose of the investigation was to determine if USTs or other buried material associated with the former onsite gasoline stations remained onsite. Also, the property was surveyed for areas of potential backfill. Geophysical techniques used included vertical magnetic gradient (VMG), terrain conductivity (TC), metal detection (MD), and ground penetrating radar (GPR). The complete geophysical survey report is provided as Appendix C.

Through VMG, six magnetic anomalies or buried metallic objects (Anomaly I through IV) were discovered throughout the subject property. In addition, using MD, two metal objects were located in the vicinity of Anomaly I and V. Clayton further investigated these anomalies through backhoe excavations. One Earth Environmental, Inc. was subcontracted to operate the backhoe equipment. On December 1, 1999, John D. Glover, Supervisor, and Marc R. Mullaney, Project Geologist of Clayton, directed the anomaly excavations. During the excavation work, Anomaly V was actually found to be two objects, which are referred to as V-A and V-B. Details regarding the excavations are summarized as follows:

Anomaly ID	Excavation Limits	Description
I	4' by 4' by 2' deep	An abandoned utility line
II	4' by 4' by 2' deep	Metallic scrap
III	4' by 4' by 2' deep	Pipe coupling or valve
IV	10' by 3' by 4' deep	Power footing/cable tie
V-A	8' by 5' 6' deep	Waste oil UST
V-B	4' by 4' by 2' deep	Metallic scrap
VI	4' by 4' by 2' deep	Metallic scrap

In addition, two areas of low TC (Areas A and B) were discovered, suggesting possible backfilled areas. GPR analysis conducted on the subject property was inconclusive due to the impenetrable nature of the soil to the GPR. The locations of the geophysical anomalies are depicted on Figure 3.

4.2 SUBSURFACE INVESTIGATION

On December 1, 1999, Mr. Mullaney of Clayton conducted a limited subsurface investigation. A total of 14 borings (B-1 through B-14) were advanced on the property in

locations shown on Figure 3 to depths ranging from 4.0 to 16 feet below ground surface (bgs). The borings were advanced using truck-mounted Geoprobe equipment. Soil samples were collected using acetate liners. As the borings were advanced, soil cores from the acetate liners were inspected for indications of contamination (e.g., unusual odors, discoloration, chemical sheen). A photo-ionization detector (PID) was also used to screen the soil samples for volatile vapors. Soil samples from various depth intervals were cut from the acetate liners and logged for lithological purposes. Details regarding the soil borings, including boring purpose, total boring depth, subsurface description, and PID readings, are summarized in Appendix D.

In addition, five of the borings (B-1 through B-5) were advanced into the shallow groundwater zone, which was found to be from about 9.0 to 12 feet bgs. A temporary well point was constructed in each groundwater sample location using 0.75-inch inside diameter (i.d.) PVC casing. The bottom of each well consisted of 5.0 feet of slotted screen and was completed to the surface with blank PVC. Grab groundwater samples were then collected using a peristaltic pump. New pump tubing was used in each sampling location.

The collected soil samples were sealed with Teflon tape and plastic end caps. The grab groundwater samples were collected in disposable bailers and transferred into laboratory prepared containers. Each sample was properly labeled and placed in a pre-chilled cooler for transport to Chromalab in Pleasanton, California, a State of California-certified laboratory. The samples were transported under formal chain-of-custody documentation.

5.0 LABORATORY ANALYSIS

In order to characterize shallow soils (the upper four feet), a total of six, two-point composite soil samples were submitted for laboratory analysis. The soil samples were selected from borings located throughout the property that exhibited the highest PID readings in shallow soil (B-3, B-7, B-11, B-12, B-13, and B-14). In addition, the five grab groundwater samples from B-1 through B-5 were submitted for analysis. Both soil and grab groundwater samples were analyzed by one or more of the following United States Environmental Protection Agency (USEPA)-approved methods:

- USEPA Method 8015M for total petroleum hydrocarbons (TPH) as gasoline (TPH-g), diesel (TPH-d), and motor oil (TPH-mo)
- USEPA Method 8020 for benzene, toluene, ethylbenzene, xylenes (BTEX, collectively), and methyl tertiary butyl ether (MTBE)
- USEPA Method 8260 for volatile organic compounds (VOCs)
- USEPA Methods 6010B/7470A for Title 22 California Assessment Manual 17 total metals (CAM 17)
- USEPA Method 6010B for California Department of Health Services Leaking Underground Fuel Tank five total metals (LUFT 5)

The analytical results are summarized in Tables 1 through 4. Copies of the certified analytical data sheets and chain-of-custody documentation are included in Appendix E.

6.0 FINDINGS

Clayton has evaluated the data generated during this Phase II ESA. Our findings are summarized below:

- During the geophysical survey and subsequent excavation work, one of the magnetic anomalies (V-A) was determined to be an approximately 500-gallon waste oil UST. Its location near the northern boundary of Parcel One suggests that it may have been associated with the original, pre-1960's onsite service station. Petroleum fuel odors were detected near this UST and there was a thin layer of an oily sludge-like material on the bottom of the tank. During this assessment, only the top and one side of the UST were exposed. To date, the UST and its contents remain at the property. None of the other magnetic or metallic anomalies were environmentally significant.

- During the geophysical survey and subsequent subsurface investigation, the TC Area A located on Parcel Two was found to be an extensive fill material consisting of silty sands and sandy gravels. The dimensions of this oval-shaped fill area are approximately 50 feet by 30 feet with irregular depths ranging from two to nine feet. Area A may be associated with former UST and associated fueling equipment removal and service station demolition activities; although, TC Area A is not directly centered over the former UST locations. Physical evidence of contamination was not encountered within the TC Area A fill material. With respect to TC Area B located on Parcel One, significant fill material and physical evidence of contamination were not found.

- During the shallow soil investigation, physical evidence of contamination was not found; although, slightly elevated PID readings were recorded. Review of the composite shallow soil sample analytical data indicates that low[1] ppm concentrations of TPH-d (1.5 ppm to 6.2 ppm) are likely to be present within the top four feet of soil throughout the subject property (both Parcels One and Two). The low[1,2] concentrations of toluene (0.012 ppm), ethylbenzene (0.034 ppm), and xylenes (0.11 ppm) were isolated in the B-12 composite, and not present across the property. No other petroleum products of VOCs were detected. In addition, low[2], background[3] concentrations of total chromium, lead, nickel and zinc were found in all six composite soil samples.

- During the grab groundwater sampling, physical evidence of contamination was found. Odorous and stained soil was observed and elevated PID readings were noted within the saturated soil zone, which is associated with the groundwater zone. The analytical results of the grab groundwater sampling show elevated[1] concentrations of several petroleum products at Parcel One, including as much as 1,600 ppb of TPH-g, 1,300 ppb of TPH-d, and 1,700 ppb of TPH-g. The presence of MTBE at 18 ppb in

B-4 is also considered somewhat elevated[4]. The BTEX compounds ethylbenzene and xylenes were detected at low[5] concentrations.

Other compounds detected in groundwater include the following VOCs: acetone, isopropylbenzene, methyl ethyl ketone (MEK), and naphthalene. Acetone and isopropylbenzene are commonly associated with laboratory reagents. MEK and naphthalene are typically used as solvents for lubricants and motor fuels. Although no regulatory guidance criteria[5] are established for these four VOCs, the detected concentrations are relatively low. Trace levels[5] of some metals, including barium, molybdenum, nickel, and zinc, were also found in groundwater at Parcel One.

Report prepared by: _____

John D. Glover
Supervisor
Environmental Services

Report reviewed by: _____

Jon A. Rosso, P.E.
Director
Environmental Services

February 21, 2000

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[1] When compared to the California State Water Resources Control Board's (SWRCB) 1989 *Leaking Underground Fuel Tank Field Manual* guidance criterion for petroleum hydrocarbons in soil and groundwater.

[2] When compared to the USEPA Region IX's 1999 *Preliminary Remediation Goals* for total metals in residential soil.

[3] When compared to (1) Lindsay's 1979 *Chemical Equilibria in Soils*, (2) Scott's 1991 *Background Metal Concentrations in Soils in Northern Santa Clara County, California*, and (3) Shacklette and Boerngen's 1984 *Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States* for background concentrations of total metals in soil.

[4] When compared to the California Environmental Protection Agency (Cal/EPA) Office of Environmental Health Hazard Assessment's (OEHHA) March 9, 1999 *Adoption of a Public Health Goal for Methyl Tertiary Butyl Ether in California Drinking Water* memorandum regarding guidance criteria for MTBE in groundwater.

[5] When compared to the Cal/EPA Regional Water Quality Control Board, Central Valley Region's (RWQCB) 1998 *A Compilation of Water Quality Goals* report that lists the Maximum Contaminant Levels (MCLs) for groundwater contaminants.

TABLES

TABLE 1

Summary of Petroleum Products and VOCs in Soil
6600 International Boulevard, Oakland, California

Sample ID	Depths (feet)	Petroleum Products								VOCs
		TPH-mo	TPH-d	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	All Analytes
B-3 (comp)	1 and 3	ND	6.2	ND	ND	ND	ND	ND	ND	ND
B-7 (comp)	2 and 4	ND	1.7	ND	ND	ND	ND	ND	ND	ND
B-11 (comp)	2 and 4	ND	3.1	ND	ND	ND	ND	ND	ND	ND
B-12 (comp)	2 and 4	ND	2.9	ND	ND	0.012	0.034	0.11	ND	ND
B-13 (comp)	2 and 4	ND	2.8	ND	ND	ND	ND	ND	ND	ND
B-14 (comp)	2 and 4	ND	1.5	ND	ND	ND	ND	ND	ND	ND

Notes:
All results reported in milligrams per kilogram (mg/kg) or parts per million (ppm)
ND = Analyte not present at or above the method detection limit
(comp) = 2-point composite soil sample
TPH-mo = Total petroleum hydrocarbons as motor oil
TPH-d = Total petroleum hydrocarbons as diesel
TPH-g = Total petroleum hydrocarbons as gasoline
MTBE= Methyl tertiary butyl ether
VOCs= Volatile Organic Compounds

TABLE 2

Summary of Total Metals in Soil
6600 International Boulevard, Oakland, California

Sample ID	Depths (feet)	Cadmium	Chromium	Lead	Nickel	Zinc
B-3 (comp)	1 and 3	ND	68	8	120	56
B-7 (comp)	2 and 4	ND	61	6.3	140	57
B-11 (comp)	2 and 4	ND	40	9	82	52
B-12 (comp)	2 and 4	ND	45	6.6	93	47
B-13 (comp)	2 and 4	ND	72	10	160	64
B-14 (comp)	2 and 4	ND	34	9.7	22	48

Notes:
All results reported in milligrams per kilogram (mg/kg) or parts per million (ppm)
ND = Analyte not present at or above the method detection limit
(comp) = 2-point composite soil sample

TABLE 3

Summary of Petroleum Products and VOCs in Grab Groundwater
6600 International Boulevard, Oakland, California

Sample ID	Petroleum Products								VOCs			
	TPH-mo	TPH-d	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Acetone	MEK	Naphthalene	IPB
B-1	ND	98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-2	ND	200	1,300	ND	ND	ND	ND	ND	70	ND	ND	ND
B-3	ND	1,000	1,700	ND	ND	8.7	1.5	18	290	54	2.6	24
B-4	ND	180	890	ND	ND	3.7	1.2	8.2	ND	54	2.6	18
B-5	1,600	1,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
All results reported in micrograms per liter (ug/L) or parts per billion (ppb)
ND = Analyte not present at or above the method detection limit
TPH-mo = Total petroleum hydrocarbons as motor oil
TPH-d = Total petroleum hydrocarbons as diesel
TPH-g = Total petroleum hydrocarbons as gasoline
MTBE= Methyl tertiary butyl ether
VOCs= Volatile Organic Compounds
MEK = Methyl Ethyl Ketone
IPB = Isopropylbenzene

TABLE 4

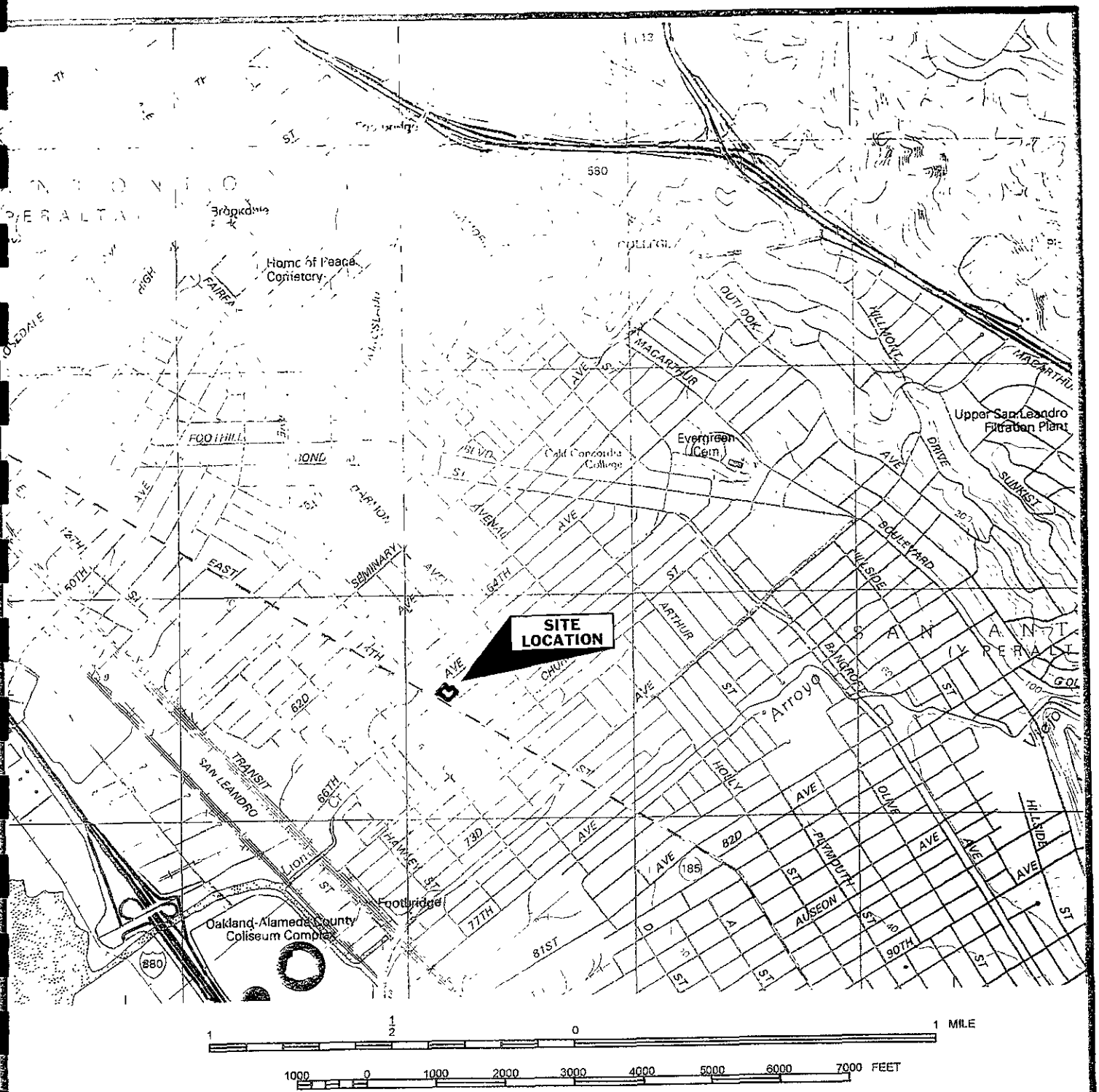
Summary of Total Metals in Grab Groundwater
6600 International Boulevard, Oakland, California

Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead
B-1	-	-	-	-	ND	ND	-	-	ND
B-2	-	-	-	-	ND	ND	-	-	-
B-3	-	-	-	-	ND	ND	-	-	ND
B-4	ND	ND	0.18	ND	ND	ND	ND	ND	ND
B-5	-	-	-	-	ND	ND	-	-	-

Sample ID	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
B-1	-	0.0051	-	-	-	-	0.015	-
B-2	-	0.01	-	-	-	-	0.018	-
B-3	-	0.013	-	-	-	-	0.017	-
B-4	0.083	0.005	ND	ND	ND	ND	0.017	ND
B-5	-	0.028	-	-	-	-	0.031	-

Notes:
All results reported in milligrams per liter (mg/L) or parts per million (ppm)
ND = Analyte not present at or above the method detection limit
- = Analysis not conducted

FIGURES



Portions of 7.5-Minute Oakland East
California Quadrangle Maps
United States Department of the Interior
Geological Survey
1997

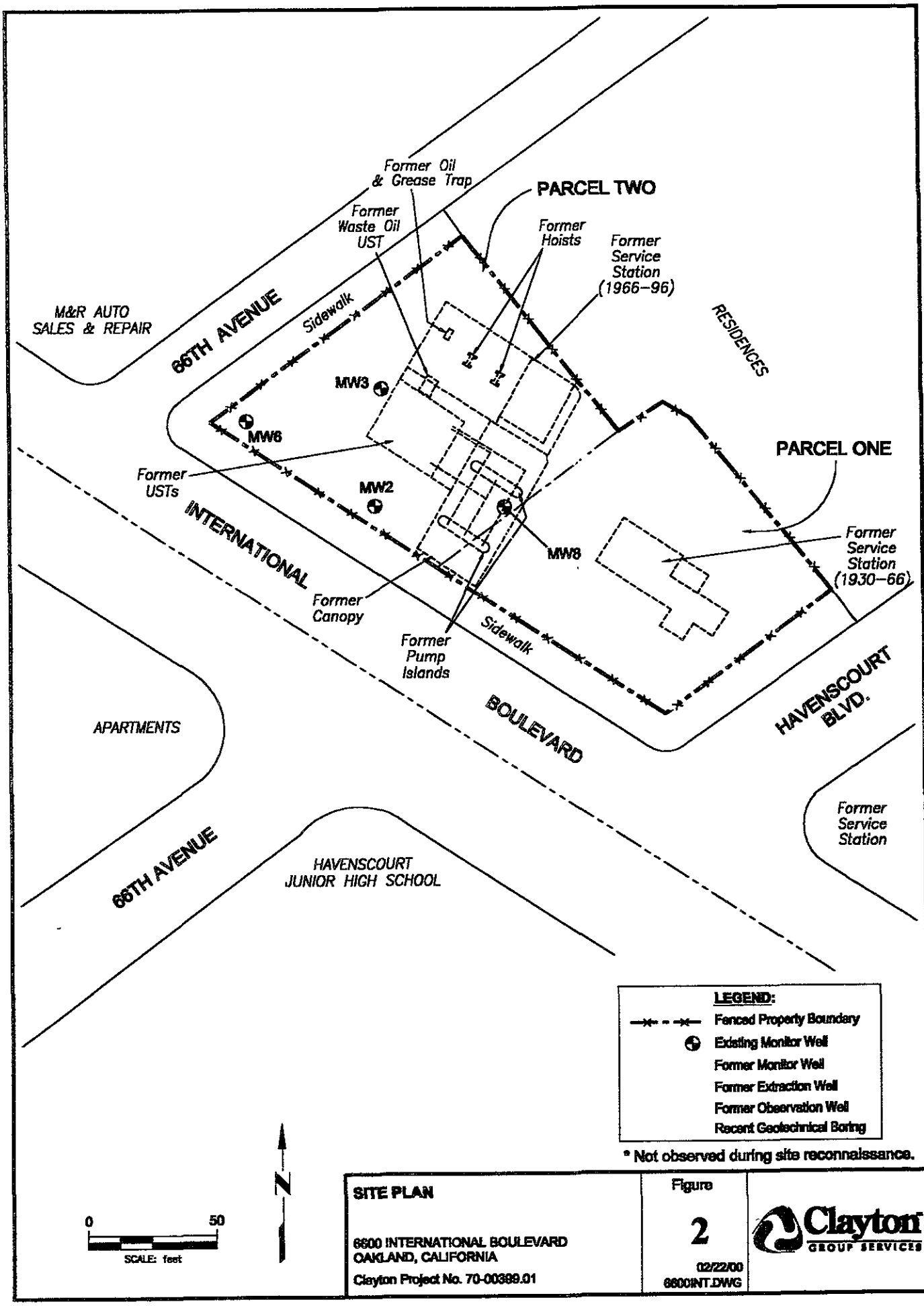
QUADRANGLE LOCATION

SITE LOCATION MAP
6600 International Boulevard
Oakland, California

Client: Resources for Community Development
Clayton Project No. 70-00399.000

Figure
1

Clayton GROUP SERVICES



SITE PLAN

6600 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

Clayton Project No. 70-00389.01

Figure
2
02/22/00
6600INT.DWG

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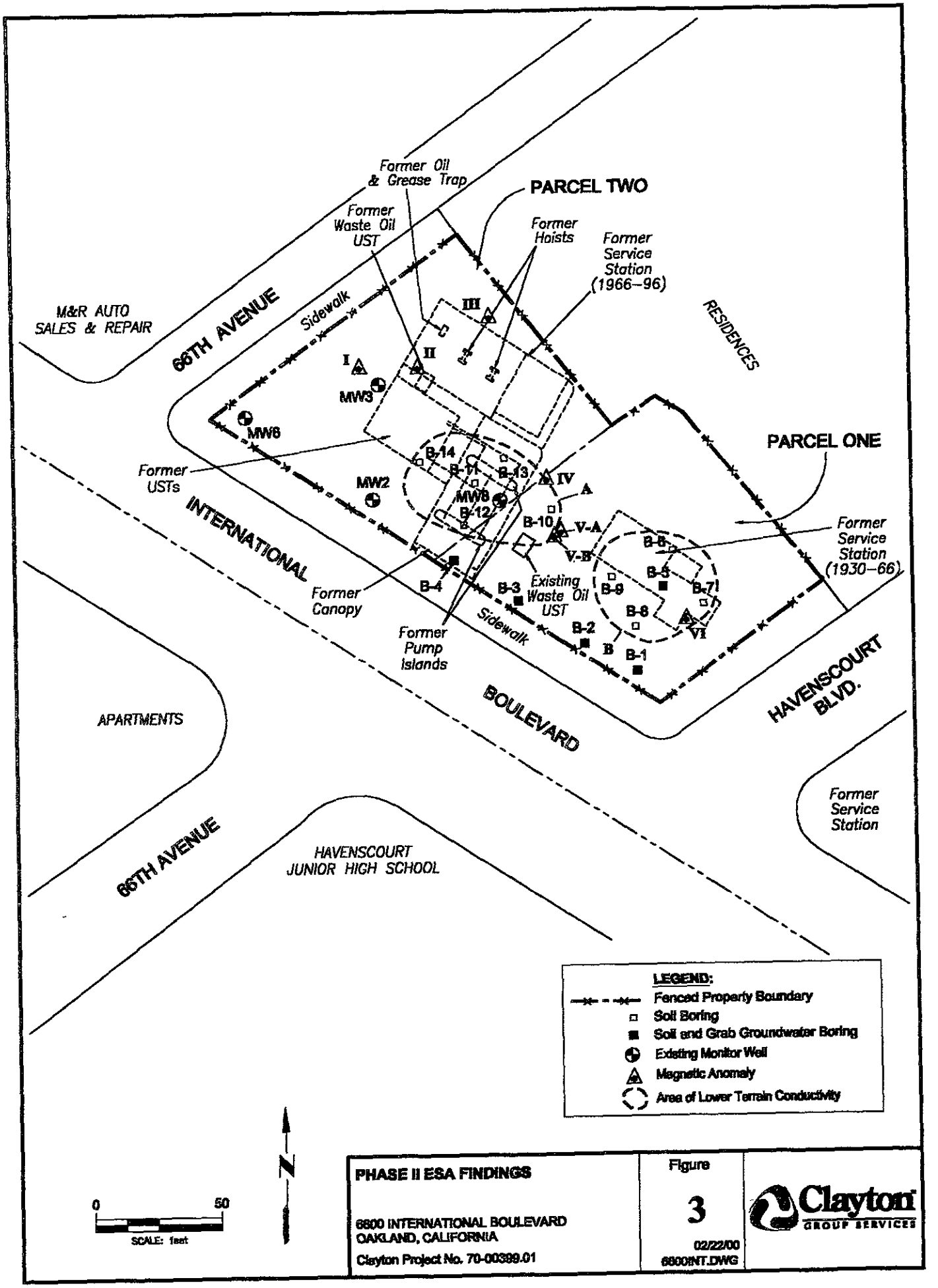

PHASE II ESA FINDINGS

6800 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

Clayton Project No. 70-00399.01

Figure

3

02/22/00
6800INT.DWG

Clayton GROUP SERVICES

APPENDIX A

RESUMES OF ENVIRONMENTAL PROFESSIONALS

Marc R. Mullaney
Staff Geologist, Environmental Services

Professional Experience

Mr. Mullaney has more than 7 years of experience in conducting environmental site investigations, sedimentology, and hydrogeology. He manages and performs site investigations, which include soil and groundwater sampling, compilation of boring logs, installation of monitoring wells, and groundwater monitoring. Mr. Mullaney has been involved in soil and groundwater plume assessment, confined-space abatement, qualitative field analysis of soil and groundwater, aquifer pump and slug testing, hydrogeological data analysis, metals contamination assessment, regulatory negotiation, air monitoring programs, removal and installation of fuel storage tanks, assessment of soil and groundwater impact, remediation of fuel spills, profiling soils and water for disposal, and various public and private environmental construction projects. He is familiar with a variety of federal, state, and local regulations and guidelines involving environmental management, including the Resource Conservation and Recovery Act (RCRA), the state of California Environmental Protection Agency (Cal/EPA) regulations, and various leaking fuel tank programs.

Recent project experience includes:

- Former Steel Mill - Mr. Mullaney was the environmental manager for a $1.3-million Cal/EPA-listed site cleanup, where the scope of work included removal and cleanup of surface debris, structural decontamination, and demolition prior to the next phase of the cleanup. Issues included RCRA-listed metals in furnace and flume dusts, cadmium-contaminated wood debris from a former cooling tower, hazardous levels of organic lead in a leaking bunker fuel system, hazardous slag-impacted soils, a cooling pond contaminated with floating fuel products, 5 feet of petroleum-contaminated sludge lining the bottom of a cooling pond, transformers leaking polychlorinated biphenyls (PCBs), PCB-containing oils of unknown origins, asbestos, sulfuric acid tanks containing solid acid precipitates, and more than 30 concrete sumps containing petroleum and soluble metal contamination. Mr. Mullaney's responsibilities included managing various waste steams and sampling for characterization and confirmation after the cleanup; management of an air monitoring program for airborne lead and zinc contamination; negotiations with the department of toxic substances control (DTSC), the local water district, and other agencies to filter and treat onsite waters to use for dust control and/or disposal; negotiations with the DTSC to recycle various contaminated substances instead of shipping to a landfill; and liaison between local and state regulatory agencies, contractors, and the client.

- Oil Refinery - Mr. Mullaney managed a $60,000 soil and groundwater plume assessment at a 100-acre site where the aquifer was approximately 135 feet. Problems encountered included a low-standing water table approximately 90 feet from the measured high stand; perched water tables, and perched product lenses. The vertical and horizontal extent of the plume was characterized by use of cross sections

and field-portable gas chromatography (GC) instruments to screen all soil samples and select which soils samples would be sent to a state-certified laboratory. He developed a lithologic model based on the soils retrieved at 5-foot intervals using 13 borings spread over the site, managed a field geologist and the refineries laboratory, coordinated supplies and budget management, and supervised field modification of boring locations based on initial data. Mr. Mullaney produced a 500-page report (including appendices) discussing findings within 2 weeks of field work completion.

- Major Petroleum Producer - Mr. Mullaney provided field management of a $70,000 confined-space entry tank remediation and demolition project involving mercury- and petroleum-impacted sludge in the bottom of three transfer tanks located in a California oil field. During the entry into each tank, the vapor levels of petroleum and mercury were monitored to ensure the health and safety of the workers. Each tank required different venting procedures to ensure worker health and safety.

- Public Utility - Mr. Mullaney conducted a $30,000 aquifer pump and slug testing project. The first phase of the project involved installation of two wells to precisely screen two discrete aquifers below the subject site. The wells were used as production and/or monitoring wells during pump and slug tests. He installed the geotechnical wells and performed three consecutive 48-hour pump tests; analyzed test data, and participated in writing the resulting report.

Employment History

Clayton Group Services, Pleasanton, California
Staff Geologist
1994 to Present

Applied Environmental Solutions, Inc., San Jose, California
Project Manager/Staff Geologist
1991 to 1994

JCP Engineering, San Jose, California
Field Technician
1991

Applied Geosciences, Inc., San Jose, California
Technician/Equipment Manager
1988 to 1989

Education

M.S., Geology, (pending 1999)
San Jose State University, San Jose, California

B.S., Geology, 1990
San Jose State University, San Jose, California

Professional Registrations/Certifications

California General Engineering Contractor Certificate (Class A)
OSHA 40-hour Hazardous Waste Operations and Emergency Response Training
OSHA 8-hour Hazardous Waste Operations Supervisory Training
OSHA 8-Hour Hazardous Waste Operations Refresher

Affiliations

Association of Groundwater Scientists and Engineers

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John D. Glover, E.I.T.
Supervisor, Environmental Services

Professional Experience

Mr. Glover has over four years experience conducting and managing Phase I and II Environmental Site Assessments (ESAs) throughout much of the Pacific Northwestern, Midwestern, and Southern United States for various financial, commercial, industrial, and governmental clients. Site assessments include old industrial sites, plating shops, semiconductor manufacturing plants, gasoline service stations, dry cleaning facilities, saw mills, laboratories, machine and auto repair shops, printing facilities, high-rise office complexes, residential properties, and undeveloped land. He has identified, and investigated through Phase II ESAs, the presence of many recognized environmental conditions. These include soil, groundwater, and building structures impacted with volatile organic compounds (VOCs), methyl tertiary-butyl ether (MTBE), polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), petroleum hydrocarbons, heavy metals, agricultural chemicals, asbestos, and lead-based paint.

Mr. Glover's experience also includes soil and groundwater remediation, regulatory compliance, facility closure, environmental management, and third party review projects. Mr. Glover routinely provides clients with recommendations and cost estimates describing methodologies for further characterization of subsurface contamination, better management of hazardous substances, and greater compliance with regulatory agency requirements.

Project Experience

Third Party Review

Large Commercial Lender

Mr. Glover provided third party review of prior and ongoing environmental reports associated with a municipal downtown redevelopment project. He also conducted independent research to fill data gaps and construct a fluid site history diagram. The 30-acre graded site included over 100 street addresses and consisted of former residential, commercial, and light industrial properties, including several gasoline service and automotive repair facilities, machine shops, a junkyard, and a pest control company. Mr. Glover reviewed soil and groundwater data and provided recommendations for additional investigations.

Acquisition Review and Management

Property Acquisition and Management Company

Mr. Glover managed the environmental aspects of a 24-site, nationwide acquisition portfolio. The subject properties were commercial sites located in the Midwestern and Southern United States. Management duties included coordinating project work with various Clayton offices, reviewing each report, and discussing results and comments with the client.

Formal Facility Closure and Sale

Food and Restaurant Supply Distributor

Mr. Glover managed the environmental aspects for a property sale and formal facility closure at a food and restaurant supply distribution facility. The environmental aspects included performing a Phase I ESA of the eight-acre site and performing a facility closure under the oversight of two different regulatory agencies. The closure activities included the following: (1) conducting an extensive Phase II ESA (over 40 borings were advanced); (2) removing a diesel underground storage tank (UST) and associated piping, and initiating in situ groundwater remediation using oxygen releasing compounds (ORCs); (3) closing two sumps; (4) cleaning heavily stained warehouse areas, including etched and pitted concrete near a battery charging area; (5) cleaning onsite storm drains without discharging wastewater to the sanitary sewer; and (6) characterizing and properly disposing of seven different hazardous waste streams. Mr. Glover also negotiated a case closure plan regarding a former diesel spill into a drainage ditch, three previously installed groundwater monitoring wells, and an 1,800-cubic yard bioremediated soil stockpile.

Soil Remediation

Biotechnology/Pharmaceutical Company

Mr. Glover managed the completion of a Phase I ESA, an extensive Phase II ESA, and Phase III soil remediation at a 121-acre former orchard and rural residential property. The identified areas of concern included the former orchard areas, a historical debris pile, a current soil fill area, several former structures, and an existing tractor maintenance shed. Petroleum hydrocarbons as oil were detected in concentrations exceeding the local regulatory criteria, and impacted soil was excavated and removed from the site. A "No Further Action" letter was issued by the regulatory agency.

Historical Research and Phase II ESA

International Shipping and Freight Company

Mr. Glover researched a voluminous historical archive and provided essential site historical data. This data was used in a subsequent mediation with a local airport regarding the airport's cost recovery plan. The result was a significant client cost savings for the client. Phase II ESA work determined that sources of significant jet fuel groundwater contamination were probably from underground utility corridors associated with offsite facilities.

Phase I and II ESA

Real Estate Developer

Mr. Glover performed a Phase I ESA on a former loft-style warehouse property that was scheduled for redevelopment into residential/studio homes. Mr. Glover discovered a UST that was missed during a previous Phase I ESA. He also directed a follow-up Phase II ESA. Two major environmental concerns were the presence of hazardous waste fill onsite, and groundwater impacted with 48,000 parts per billion (ppb) of hexavalent chromium that was detected about 50 feet upgradient from the subject site. The source of the chromium was an upgradient former plating facility.

Phase I and II ESA
Real Estate Developer
Mr. Glover performed a Phase I ESA on a 1.5-acre former commercial nursery and soil testing laboratory site that had a gasoline UST. The site was to be redeveloped with single-family residences. Mr. Glover's subsequent Phase II ESA determined that VOCs, petroleum hydrocarbons, and metals were not significantly impacting the site. However, chlorinated pesticides, such as chlordane and dieldrin, were present in concentrations exceeding the United States Environmental Protection Agency's (USEPA's) preliminary remediation goals (PRG's) for residential soil. The impacted soil was located in the future unpaved, yard areas; it was excavated and off-hauled for disposal.

Phase I ESA
Large Lending Institution
Mr. Glover performed a Phase I ESA on an 80-acre Micro-fiber/Pressboard/Battery Separator manufacturing site in Oregon. Groundwater at the site was impacted with elevated concentrations of trichloroethene (TCE) and similar VOCs. The contamination had moved into nearby residential drinking water wells. Other environmental concern included sumps, USTs, fill of unknown origin/potential solid waste dumping, drain fields, wastewater treatment ponds and creek races, surface staining, railroad activity, wells, asbestos, and lead-containing paint. Mr. Glover provided a summary of the environmental concerns, recommendations for possible actions, and order-of-magnitude cost estimates for both additional investigations and remediation activities.

Phase I and II ESA
Animal Shelter
Mr. Glover, through Phase I and Phase II ESAs, discovered heavy metal soil contamination associated with a former railroad maintenance yard that was beneath a San Francisco animal shelter. Our client used the results of our investigation in their property buy contract negotiations.

Soil Investigation
Municipal Government
Mr. Glover investigated the soil impacts of aerially deposited lead and petroleum hydrocarbons along a freeway right-of-way. The city and state were planning on widening the highway. Based on Mr. Glover's statistical analysis of the laboratory data, the soil was determined to be useable as roadway fill dirt.

Database Management and Updates
Petroleum Refining Company
Mr. Glover helped maintain a database of Hazardous Material Management Plans (HMMPs) for over 130 gasoline service stations located throughout California. Mr. Glover managed the annual HMMP update process with the local environmental regulators and the facility contacts, and compiled the data in a concise spreadsheet interface for the client.

Phase I ESA

Luxury Resorts

Mr. Glover conducted Phase I ESAs on two large luxury resorts in rural areas of California. Issues at these facilities included onsite vehicle maintenance and fueling operations, wells, septic systems, and sensitive ecological receptors. Groundwater contamination from a gasoline UST was found not to be impacting a nearby stream. A "No Further Action" letter was later granted from the local environmental agency.

Environmental Liability Assessment

Telecommunications Corporation

Mr. Glover worked with a large telecommunications corporation in assessing environmental liabilities associated with more than 200 satellite facilities through the Pacific Northwest. Mr. Glover's duties included communication with client field representatives to obtain site-specific data, management of information databases, physically inspecting and auditing selected facilities, and providing required documentation to various regulatory agencies.

Employment History

Clayton Group Services, Inc., Pleasanton, California
Supervisor
1998 to Present
Environmental Engineer
1997 to 1998
Staff Environmental Engineer
1995 to 1997

Education

B.S., Biological and Engineering Sciences – Environmental Engineering, 1995
Washington University in Saint Louis, Saint Louis, Missouri

Professional Registrations/Certifications and Continuing Education

Engineer-In-Training, Certification No. 109119
AHERA-Accredited Asbestos Building Inspector No. 5PSI 65498
OSHA 40-Hour Hazardous Waste Operations and Emergency Response Certification
Remediation Facilities Engineering; Design, Safety, Permitting, and Cost Estimating; University of California – Berkeley, Spring 1999
Enhanced Natural Attenuation of Chlorinated Solvents and Petroleum Hydrocarbons – Hydrogen Release Compound (HRC®)/Oxygen Release Compound (ORC®) – Design and Injection Seminar; Precision and Regenesis, Spring 1999

Clayton GROUP SERVICES

Jon A. Rosso, P.E.
Director, Environmental Services

Summary of Professional Experience

Mr. Rosso has more than 17 years of experience in the environmental consulting field. He has served in senior technical, project management, litigation support, and construction management capacities on a variety of multidisciplinary projects in the areas of waste management, groundwater hydrology, risk assessment, bedrock investigations, and civil engineering. He has managed various large-scale projects valued at up to $40 million.

Mr. Rosso has planned and executed hundreds of investigations related to soil and groundwater contamination issues and has worked extensively with regulatory agencies throughout the United States. Mr. Rosso's strong understanding of state and federal environmental regulations and practical solutions provides particular expertise in client/agency negotiations leading to favorable client results. Contaminants of concern on these projects have included volatile organic compounds (VOCs) as dissolved and as dense nonaqueous-phase liquids (DNAPLs); heavy metals; dioxins, pesticides; petroleum hydrocarbons; polychlorinated biphenyls (PCBs); asbestos; and polynuclear aromatic hydrocarbons (PAHs).

Mr. Rosso has significant experience with numerous cleanup technologies and understands the feasibility, practicality, and effectiveness of the common options. Remedial systems with which he has extensive experience include large-scale removal, groundwater extraction, encapsulation, groundwater treatment, vapor treatment, dual phase extraction, soil vapor extraction, air sparge systems, biodegradation, oxidation, chemical fixation, barrier systems, hydraulic control, and waste stabilization. Mr. Rosso is currently responsible for overseeing the environmental risk management and remediation practice for Clayton in the Northern California Region, where he is responsible for the quality and budgets of complex environmental scenarios from inception to completion.

Project Experience

Trichloroethane (TCA) Investigation and Remediation

Manufacturing Industry

Mr. Rosso was the project manager, construction manager, and engineer of record for the investigation and remediation of a historical release of more than 1 million pounds of TCA into overburden and bedrock groundwater at a major manufacturing facility in Rhode Island. The groundwater contamination threatened one of the primary drinking water aquifers for Rhode Island. The vertical and lateral extent of the plume was defined using a network of surface water monitoring points and various well types including microwells, overburden monitoring wells, bedrock wells, multiple stage completion wells, and private domestic wells.

Trichloroethane (TCA) Investigation and Remediation (continued)
Sampling data indicated that the dissolved plume encompassed an area of about 200 acres and extended more than a mile from the site. The TCA product, a DNAPL, was found over a quarter mile away from the original source at a depth of 400 feet below the ground surface.

The remediation plan included installing a half-mile-long interceptor subdrain system to hydraulically control and extract the overburden and bedrock groundwater for treatment. The majority of the interceptor subdrain was to be constructed on property that had originally been a land grant from the King of England and is a registered historic property. Archeological investigations on this property, as part of the remediation permitting and planning, uncovered a prehistoric feature approximately 4,000 to 7,000 years old, requiring complete removal and preservation. The archeological investigation, permitting, and removal was performed efficiently and did not impact the project schedule. The remedial design and permit process involved approvals from six divisions of the Rhode Island Department of Environmental Management (RIDEM); United States Army Corps of Engineers (USACE), United States Environmental Protection Agency (USEPA), the U.S. Department of Interior, and various historic preservation commissions.

Mr. Rosso assisted legal counsel with property access, easements, and well closure agreements. To allow construction and operation of the interceptor subdrain to proceed, a revised and amended consent agreement with RIDEM was successfully negotiated. This agreement consolidated key permitting authority among the various divisions and created a freshwater wetland delineation and mitigation plan. As the project manager, construction manager, and engineer of record, Mr. Rosso was responsible for hiring and managing the consultants and contractors, developing the plans and specifications, evaluating bids, awarding the contracts, and approving all payments. Project activities ultimately led to site containment using a system that was essentially passive, with very reasonable annual operating costs.

Superfund Site Remediation
Superfund Site – Former Petroleum Recycling Facility
Mr. Rosso served as program manager for implementation of removal activities at a former petroleum recycling facility in Patterson, California. The abandoned waste oil recycling facility contained about 5.5 million gallons of hazardous waste and hazardous waste water, tank-bottoms sludge, and waste oil. In addition, the site contained 1,200 drums of used oil filters and miscellaneous chemicals. Waste water and sludge were found to be RCRA hazardous waste and to contain dioxin compounds. The project was initiated under an order issued by the USEPA, and work is funded through a Steering Committee representing 21 potentially responsible parties (PRPs) who are cooperating to fund the remediation. The project is two-thirds completed, and the final stage of sludge removal began in November 1999. Working for the PRPs, Mr. Rosso managed the investigation of waste materials,

Superfund Site Remediation (continued)
regulatory interaction, community relations, cost recovery, treatability analysis, value engineering, waste disposal, and site decontamination. USEPA Region IX officials have publicly praised the cleanup project, calling it a "model effort for Superfund removal projects."

Litigation Support
Steel Industry
Mr. Rosso provided litigation support to defend this steel company from a claim that the historic operations of the steel plant contaminated an adjacent property that recycled steel barrels. At issue was a claim that heavy residual petroleum fuel known as Bunker fuel spilled on the client's property and migrated cross-gradient to the adjacent property. Working with an expert witness in chemistry, Mr. Rosso evaluated previous investigations by others, historical aerial photographs and records, regulatory files, depositions, cost estimates, and various remedial investigations and feasibility studies.

Based on the analysis of the available data and computer modeling techniques, Mr. Rosso and Dr. James Bruya (a chemical expert) developed a theory that numerous chemical products were spilled as part of the barrel recycling process and were subsequently affected by caustic cleaning solutions. The theory speculated that modified chemical compounds observed in soil and groundwater samples were then incorrectly interpreted to be residual petroleum fuel hydrocarbons by analytical laboratories that used qualitative analytical techniques. To defend the client, a comprehensive subsurface investigation and laboratory testing program was implemented on both properties to explore the plaintiff's theory of migration and Clayton's theory as source of the contamination. The investigation and specialized laboratory-testing program demonstrated that the source of contamination was the barrel cleaning facility.

Tetrachloroethene (PCE) Investigation and Remediation
Manufacturing Industry
A release of more than 60,000 pounds of PCE into groundwater occurred at a major manufacturing facility in Security, Colorado. The groundwater contamination affected the main aquifer for the area, which supplied 35,000 people with drinking water. Mr. Rosso served as a senior technical advisor for the investigation and remediation of the site. The project team used a network of more than 100 monitoring wells, municipal wells, and domestic wells to define the vertical and lateral extent of the plume, which was more than six miles long. Mr. Rosso developed various alternative remedial plans configured to fit on various offsite properties, evaluated the effectiveness of the scenarios, and developed detailed cost estimates for each conceptual plan including long-term operation costs. The remedial alternatives included groundwater extraction and treatment for hydraulic control, chemical

Tetrachloroethene (PCE) Investigation and Remediation (continued)
reaction walls, soil bentonite walls, air sparging, chemical injection and reaction, and natural attenuation. Based on extensive aquifer testing, subsurface investigation, and computer modeling, a hydraulic control system was designed and presented to the Colorado Department of Public Health, which approved the plan. The system was implemented and appears to be effective.

Site Assessment and Subsurface Investigation
Municipal Redevelopment Agency
As a senior environmental consultant to the San Francisco Redevelopment Agency, Mr. Rosso conducted a site assessment and subsurface investigation for the proposed parking facility at the San Francisco Giants' new baseball park. The environmental site assessment (ESA) identified several issues. First, the property had been part of a major fuel-oil handling facility operating between 1920 and 1930. Aerial photographs from 1930 showed three 40-foot-diameter aboveground oil tanks (ASTs) and a pump station onsite. The adjacent properties contained 19 ASTs with one tank measuring 150 feet in diameter. Second, the ESA identified that the site was underlain with 20 to 30 feet of rubble debris from the 1906 earthquake and fire. The subsurface investigation was designed to characterize the subsurface and quantify the remedial issues for the construction of the parking structure. The subsurface investigation confirmed that earthquake debris were present and contaminated with lead, hydrocarbons, and PAHs. Third, the ESA identified significant quantities of heavy hydrocarbons underlying the property. Fuel characterization analyses indicated that the hydrocarbons were residual fuel oil and crude oil. Mr. Rosso reviewed various remedial options with the San Francisco Department of Public Health and reached agreement that the most cost effective and practical remedial plan was to encapsulate the material onsite. These activities were completed in a timely manner, allowing the project to proceed as scheduled on a sound environmental and fiscal basis.

Site Investigations, Evaluations, and Remediation
State Superfund Sites – Landfills
Mr. Rosso investigated, evaluated, and remediated two California State Superfund landfills that contained chromium-contaminated furnace bricks. In the past, a local winery's glass bottle furnaces had been remodeled and the brick linings were placed in uncontrolled landfills. The bricks subsequently released hexavalent and trivalent chromium to groundwater. The assessment involved the installation of monitoring well networks at each landfill to define the vertical and lateral extent of groundwater contamination. Based on review of historical aerial photographs, extensive exploratory trenching programs were developed to locate the bricks within each landfill. The most cost-effective remedial alternative included the complete removal of the contaminated bricks (approximately 5,000 cubic yards) and the extraction and treatment of shallow groundwater. The remedial actions resulted in site closure and removal from the state Superfund list.

Mediation and Litigation Support

Transportation Industry

Mr. Rosso provided mediation and litigation support for a major overnight courier corporation against the San Francisco International Airport regarding cost recovery for hazardous waste remediation encountered during the construction of Taxiway C. The project involved developing defense arguments through extensive historical research, evaluation of investigations by multiple parties, identification of various types of fuel hydrocarbons, analysis of airport cost claims and construction schedule impacts. The work by Mr. Rosso provided a strong basis for the client to negotiate with the airport.

Landfill Investigations

Real Estate Development Industry

A 1,000-acre development was planned for Orinda, California. As part of the environmental assessment of the property, Mr. Rosso investigated four major onsite landfills, which contained construction debris. The landfills were delineated using historic aerial photographs and topographic mapping. The four landfills contained more than 100,000 cubic yards of construction debris. A subsurface investigation was designed to investigate and characterize the landfills, some of which extend to depths of 60 feet below ground surface. The laboratory-testing program demonstrated that three of the landfills did not contain hazardous compounds and could be used as general fill in the development. One of the landfills, which was located in a former quarry, contained high concentrations of lead, hydrocarbons, and PCBs. The contaminated fill material was primarily soil mixed with metal debris, tires, and asphalt. Interviews with former ranch personnel identified the material as Caltrans shoulder scrapping. As part of remedial feasibility study, Mr. Rosso developed surface-water and bedrock groundwater investigations. Based on the results of the investigations, a remedial action plan was developed. Due to toxicity and solubility issues with the fill, the most practical remedial solution was excavation and offsite disposal, which was implemented, allowing the development project to move forward.

Emergency Response and Remediation

Transportation Industry

Mr. Rosso was the onsite technical advisor and project manager for the emergency response and remediation of a massive toxic chemical spill due to a 23-car train derailment north of Houston, Texas. The remedial action included the rapid restoration of the railroad line and the protection of a nearby river. Working with the contractor, Mr. Rosso identified the lateral and vertical extent of soil contamination and developed a remedial program, which involved removing 700,000 gallons of hazardous liquids, excavating 14,000 cubic yards of soil, and restoring the remediated area with a low permeability cap. Working with the Texas regulatory agencies, Mr. Rosso implemented a followup groundwater investigation, which concluded that only minor residual contamination existed following the remediation.

Site Remediation Plans

Real Estate Redevelopment

As project manager, Mr. Rosso prepared site remediation plans for a mixed-use, master-planned, water-oriented development to be built on 50 acres along the shore of San Francisco Bay. Historically, the site was part of a highly industrialized area, which included major steel production and fabrication facilities. Mr. Rosso studied past manufacturing operations and existing site conditions and evaluated various previous investigations conducted by others. As part of this study and studies by others, more than 275 soil samples were collected and chemically analyzed. Statistical evaluation of the data indicated that hydrocarbons and heavy metals were present in near-surface soil in localized areas of the site and did not substantially affect the groundwater. The remediation plan, developed in association with regulatory agencies, consisted of excavating and removing 40,000 cubic yards of contaminated soil from various areas of the site followed by chemical fixation, compaction, and encapsulation of the excavated soil beneath a 5-acre concrete parking structure on the property. The plan was approved and implemented, allowing the development to proceed as planned and in compliance with environmental regulations.

Site Assessments and Remediation

Chemical Industry

Mr. Rosso was project manager for the site assessment and remediation of two inactive evaporation ponds containing 9,000 cubic yards of residual sludge materials from aluminum anodizing processes at a California chemical manufacturing facility. Interacting with the California Regional Water Quality Control Board (RWQCB) on behalf of the client and one of its subsidiaries, Mr. Rosso developed a site characterization program, which focused on defining the subsurface conditions, soil quality, and extent of groundwater contamination. These assessment activities involved drilling and continuously sampling soil borings, installing monitoring and extraction wells, logging geophysical subsurface conditions, and chemically testing soil and groundwater samples. Evaluation studies included investigating the effects of high pH on groundwater geochemistry, treatability studies for nonhazardous disposal of sludge, aquifer testing, and computer modeling for groundwater extraction systems. The remediation consisted of excavating the sludge material, disposing of the material as nonhazardous waste, controlled backfilling and surface grading of the former pond areas, and monitoring geochemical transformations in the groundwater. These activities brought the site into compliance with state environmental regulations.

Site Characterization and Remedial Plans

Food Processing and Distribution Plant

As a senior technical consultant, Mr. Rosso directed site characterization activities and developed remedial plans for a 70-acre food processing and distribution facility in California. Mr. Rosso conducted an ESA of the property and identified several areas of concern including multiple fuel and solvent handling facilities and the former presence of 18 underground storage tanks (USTs), primarily in a fuel tank farm area. Investigations of the

Site Characterization and Remedial Plans (continued)
UST areas indicated significant releases to the subsurface. Free-floating fuel product was found on the groundwater surface. Fuel characterization techniques identified the floating fuel product as a mixture of gasoline and diesel. Various remedial options reviewed in detail included horizontal extraction wells, bioremediation, injection of hydrogen peroxide, product extraction, soil vapor extraction, groundwater sparging, and excavation. Evaluations indicated that the most cost-effective and practical remedial plan was to remove the free product and monitor the natural attenuation of the plume. In addition to onsite issues, chlorinated organic solvents were found in groundwater entering the property from an upgradient source. Mr. Rosso identified potential offsite sources of chlorinated solvents through the use regulatory record and historic aerial photography. This information was used by the client to determine the remedial course of action and allowed the major rehabilitation of the facility to proceed on schedule.

Subsurface Evaluation
Transportation Industry
As project manager, Mr. Rosso evaluated the subsurface conditions for the expansion of a private waste water treatment plant and major access road at the San Francisco International Airport. These renovation projects were located adjacent to major jet fuel distribution facilities not owned by the Airport. The investigation focused on identifying, delineating, and quantifying fuel products in the subsurface. The laboratory testing program included fuel fingerprinting and fuel characterization techniques. The investigation identified jet fuel products floating on the groundwater in several areas. The objective of remedial activities was to protect foundation and pipeline construction workers within the jet fuel contaminated areas. These activities delineated the areas of concern and minimized the uncertainty for the expansion project bidding contractor. This resulted in a more accurate bid and minimized change orders.

Trichloroethene (TCE) Investigations
Manufacturing Facility
As a senior technical advisor, Mr. Rosso investigated the presence of TCE in groundwater beneath two adjacent manufacturing facilities in central California. He assisted the downgradient property owner and its environmental counsel to evaluate the work of opposing consultants, assess and delineate the extent of contamination, and develop a variety of possible remedial actions. The work also included assessing groundwater flow and using numerical simulation models to estimate the fate and transport of chemicals and the extraction systems' zone of capture. These investigations demonstrated the upgradient facility as the major source of contamination. Mr. Rosso provided litigation support to the environmental counsel for the downgradient property owner, evaluated remedial alternatives, and prepared community relations plans. The most cost-effective measures proved to be groundwater extraction and treatment and soil vapor extraction from the vadose zone. As a result of these activities, the client received a favorable settlement.

Contamination Source Investigation

Real Estate Redevelopment

As part of the redevelopment of downtown Hartford, Connecticut, a major bank was foreclosing on several contiguous properties. The ESAs and subsurface investigations by others identified chlorinated solvents in the groundwater on the properties. The main issue for the bank involved the source of the contamination, which the previous consultant believed was onsite. Based on the evaluation of the data, subsurface conditions, and hydrogeologic regime, it appeared that an offsite source was responsible for the chlorinated solvents in the groundwater. The review of regulatory records identified a nearby property that was previously used by a barrel cooperage, which had recycled steel barrels. The former cooperage had been replaced with an office building for the Connecticut Department of Public Works. Regulatory records indicated that the barrel cooperage had recycled chlorinated solvents and apparently had buried a large number of drums, which were uncovered during the construction of the office building. Computer analysis and models demonstrated that the source of contamination was most likely the former barrel cooperage. These findings allowed the bank fund the redevelopment project.

Employment History

Clayton Group Services, Inc. – Pleasanton, California
Director, Environmental Services
1998–Present

A. F. Evans Company, Inc. – San Ramon, California
Manager of Acquisitions and Project Manager
1997–1998

Treadwell & Rollo, Inc. – San Francisco, California
Founding Shareholder, Officer, and Senior Associate Engineer
1988–1997

Geomatrix Consultants, Inc. – San Francisco, California
Senior Staff Engineer
1984–1988

Woodward-Clyde Consultants – Oakland, California
Staff Engineer
1982–1984

Education
M.S., Civil Engineering (Construction Management), 1988
University of California, Berkeley, California

B.S., Civil Engineering, 1984
University of California, Berkeley, California

Professional Registrations and Certifications
Environmental Assessor: California (inactive)
Licensed Civil Engineer, State of California, No. 45310, 1990
Licensed Civil Engineer, State of Connecticut, No. 7818, 1993
Licensed Civil Engineer, State of Massachusetts, No. 37347, 1993
Licensed Civil Engineer, State of New Jersey, No. 38988, 1995
Licensed Civil Engineer, State of Rhode Island, No. 6057, 1993

Professional Affiliations
American Chemical Society (ACS)
American Society of Civil Engineers, (ASCE)
Chi Epsilon, National Civil Engineering Honor Society
National Ground Water Association (NGWA)

APPENDIX B

ACPWA DRILLING PERMIT

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-6575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 6600 INTERNATIONAL BLVD. OAKLAND, CA

California Coordinates Source / ft. Accuracy ± / ft.
CCN / ft. COE / ft.
APN / / /

CLIENT
Name RESOURCES FOR COMMUNITY DEVELOPMENT
Address 2131 UNIVERSITY AV., #204 Phone 510.841.4410 x20
City BERKELEY Zip 94704

APPLICANT
Name JOHN D. GLOVER
c/o CLAYTON GROUP SERVICES Fax 925.426.1057
Address 6920 KOLL CTR. PKWY. Ste 619 Phone 925.426.2690
City PLEASANTON, CA Zip 94566

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other NONE	☒

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☒ GEOPROBE		

DRILLER'S LICENSE NO. 636387 (PRECISION SAMPLING, INC.)

WELL PROJECTS N/A
Drill Hole Diameter ___ in. Maximum
Casing Diameter ___ in. Depth ___ ft
Surface Seal Depth ___ ft. Number ___

GEOTECHNICAL PROJECTS
Number of Borings UP TO 20 Maximum
Hole Diameter 3 in Depth 16 ft.

ESTIMATED STARTING DATE 12/1
ESTIMATED COMPLETION DATE 12/2

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

APPLICANT'S SIGNATURE [signature] DATE 11/30/99

FOR OFFICE USE

PERMIT NUMBER 99WR685
WELL NUMBER
APN

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA 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 logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
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.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. 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.

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

F. WELL DESTRUCTION
See attached

(G.) SPECIAL CONDITIONS SEE ATTACHED INFORMATION

APPROVED Lawrence L. Codd DATE 12-3-99

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5248 MARLON MAGALLANES/CINDY HUTCHINSON
FAX (510) 670-5262

WATER RESOURCES SECTION
GROUNDWATER PROTECTION ORDINANCE
For Monitoring Well at Clean or Contaminated Site

Destruction Requirements:

1. Drill out the well so that the casing, seal, and gravel pack are removed to the bottom of the well.
2. Sound the well as deeply as practicable and record for your report.
3. Using a tremie pipe, fill the hole to 2 feet below the lover of finished grade or original ground with neat cement.
4. After the seal has set, backfill the remaining hole with compacted material.

APPENDIX C

GEOPHYSICAL SURVEY REPORT

NORCAL GEOPHYSICAL CONSULTANTS, INC.

December 14, 1999

Mr. John Glover
Clayton Environmental Consultants, Inc.
6920 Koll Center Parkway
Pleasanton, CA 94566

Subject: Geophysical Investigation
6600 International Blvd Property
Oakland, CA

Dear Mr. Glover,

This report presents the findings of a geophysical investigation performed by NORCAL Geophysical Consultants, Inc. on a portion of a vacant lot in Oakland, California. NORCAL Geophysicist David Bissiri and Field Technician Travis Black conducted the investigation on November 11, 1999.

SITE DESCRIPTION

The site is located on the east side of East 14th Street (International Boulevard) between 66th Avenue and Havenscourt Boulevard. The site is currently an open, level dirt lot, however past uses included two gasoline stations during two different periods. The first gasoline station was active from the late 1920's through the 1960's on the southern half of the site (adjacent Havenscourt Blvd.), while the other station was active from the 1960's through the 1990's on the northern half of the site (adjacent 66th St.). The geophysical investigation area is the approximately 220- by 100-foot trapezoidal area within the chain link fence surrounding the site (see Plate 1). In addition to the fence other notable above ground cultural features, in or near the investigation area, include several monitoring wells, private residences east of the site, and minor amounts of randomly distributed scrap. This scrap included such objects as abandoned television sets, automobile wheels and tires, yard waste, etc.

PURPOSE

The purpose of the investigation was to use vertical magnetic gradient (VMG), terrain conductivity (TC), metal detection (MD), and ground penetrating radar (GPR) techniques to determine the existence of suspected underground storage tanks (UST's), hydro-pneumatic vehicle lifts, piping or other features associated with the former gasoline stations. Alternatively, if the UST's have been removed, then the possible backfilled tank excavations were also a target of the investigation.

METHODOLOGY

Detailed descriptions of the geophysical methods, instrumentation, and data interpretation are provided in Appendix "A"

DATA ACQUISITION

The first task undertaken at the site was to establish a survey grid to guide both the VMG and TC data collection. This grid would also be used for the MD and GPR follow-work. The grid consisted of "Northing" lines parallel to East 14th Street spaced 5 feet apart with measurement points at 5-foot intervals along the lines. Following the grid set-up, we used a proton precession magnetometer to collect VMG data and a terrain conductivity meter to collect TC data. The data were up-loaded to a field computer and processed to produce preliminary VMG and TC contour maps. Both the VMG and TC contour maps were evaluated for evidence of buried metallic objects which could be UST's, vehicle lifts, etc. The TC map was also evaluated for evidence of backfilled areas.

Following the VMG and TC survey portions of the investigation, the MD method was used to further investigate specific suspected target areas identified on the VMG and TC contour maps. This involved several bidirectional MD survey traverses approximately ten to twenty feet long spaced approximately 1-foot apart across each suspected area.

The last method used in this geophysical investigation was GPR. Data profiles from bidirectional GPR traverses were evaluated for evidence of UST's and areas of backfill. The GPR traverses are depicted on Plate 1 as the solid red lines. The shorter, 10-foot long traverses are across suspected buried metallic objects identified on the VMG and TC contour maps as possible location while the longer GPR traverses were obtained across the southern half of the property. These longer traverses were obtained at the request of Clayton Environmental Consultants since this portion of the property was the location of the poorly documented older gasoline station.

RESULTS

The geophysical results and data interpretation are shown on Plates 1, 2, and 3. Plate 1 is the generalized site plan showing the location of the pertinent above ground features such as the fences and monitoring wells, limits of the investigation area, and locations of the GPR traverses. Plate 2 is the VMG contour map and Plate 3 is the TC contour map. Our interpretation of the VMG contour map indicate the presence of six locations where buried suspect metallic objects may exist. Our interpretation of the TC data suggests the existence of two areas of possible backfill. The MD survey detected two notable buried metallic objects. The GPR results were inconclusive. Detailed discussions of each investigation method's results are presented below:

VMG

Plate 2 shows several areas where the contour lines are closely spaced and tightly contorted. This is most evident along the northern, eastern, and southern boundaries. These tightly spaced contours (or anomalies) indicate the presence of ferrous material, but most of the anomalies are

interpreted as being due to the effects of the above ground features such as the chain link fence and scattered debris. Six of the anomalies, however, are interpreted as being due to buried objects. The approximate location these suspicious VMG objects are depicted on Plate 2 as the blue triangles labeled I through VI. All of the suspicious anomalies, except Anomaly I, are believed to be due to isolated, localized objects. Anomaly I may not be due to a localized object but actually be due to the "end effects" of an abandoned utility line that terminates nearby. Another possibility is that this anomaly is due to the effects of monitoring well MW-3. Anomalies II, III, and V, on the other hand, do have the magnetic characteristics of relatively large, isolated ferrous objects. Such objects could be waste-oil UST's, hydro-pneumatic lifts, abandoned well casings, etc. In contrast, Anomalies IV and VI have the characteristics not of large bodies, but rather those of isolated metallic scrap. Given the location of Anomaly VI and the characteristics of the surrounding VMG contours it appears that this anomaly may only be the largest of several small metallic bodies within a larger debris field.

It should be noted that magnetic interference from above ground objects, especially the chain link fence, could mask the VMG effects of other objects buried nearby. Therefore, it is possible that not all notable buried ferrous objects may have been detected.

TC

Plate 3 shows several areas where the contour lines are closely spaced and moderately contorted. As with the VMG data this is most evident along the northern, eastern, and southern boundaries. The terrain conductivity generally increases toward the boundaries of the site, especially along the northern and eastern boundaries. Most of this increase in conductivity is believed to be due the effects of the chain link fence, but other factors coming from outside the investigation area may have contributed as well. Among these is an increase in soil moisture content along the northeastern boundary due to landscape watering from the adjacent residence. An increase in soil moisture could also be the case for the northern boundary if excess rainwater runoff from the southern gutter spilled onto the site during heavy rains. Within the site are two notable areas of lower terrain conductivity than the surrounding soil. These areas are depicted on Plate 3 as the two shaded blue ovals labeled "A" and "B". These areas of lower conductivity are interpreted to represent possible backfilled excavations. Alternatively these areas could be the former locations of the demolished gasoline station buildings or pump islands.

MD(metal detector)

The two buried metallic objects were detected by the MD survey and are shown on Plate 1. One of these objects is an apparently abandoned utility line in the northwest corner of the investigation area and is depicted by the dashed black line labeled 'UU". The other buried object is located near the center of the investigation area, depicted as the shaded blue circle. The MD results of this latter object had characteristics similar to those of a well-head or manhole cover.

GPR

The GPR results from all the traverses were inconclusive. No signal reflections suggestive of buried metallic objects or backfilled excavations were evident in the data. A calibration traverse across the known abandoned utility in the northwest corner of the site did not show the utility. The estimated depth of burial for this utility is about two feet (based on the metal detector results). We therefore believe that GPR characterization of the site was limited to the upper two feet of soil.

STANDARD CARE AND WARRANTY

The scope of NORCAL's services for this project consisted of using geophysical methods to characterize the shallow subsurface. The accuracy of our findings is subject to specific site conditions and limitations inherent to the techniques used. The services were performed in a manner consistent with the level of skill ordinarily exercised by members of the profession currently employing similar methods. No warranty, with respect to the performance of services or products delivered under this agreement, expressed or implied, is made by NORCAL. We appreciate having the opportunity to provide you with this information.

Respectfully,

NORCAL Geophysical Consultants, Inc.

David J. Bissiri
Geophysicist, GP-1009

DJB/WEB/jh

Enclosures: Plates 1-3

Appendix A - GEOPHYSICAL METHODS AND INSTRUMENTATION

Appendix A

GEOPHYSICAL METHODS and INSTRUMENTATION

Vertical Magnetic Gradient (VMG)

A magnetic gradiometer measures the vertical gradient of the earth's magnetic field. NORCAL's gradiometer consists of two total field magnetic sensors separated vertically by one-half meter. The magnetic field strength is measured simultaneously at both of these sensors. The difference in magnetic intensity between these measurements is essentially the vertical gradient at that point of the earth's magnetic field. Because the vertical gradient is constant with respect to time, the diurnal corrections commonly needed for total field magnetics data processing is eliminated. In addition, since a gradiometer is affected less by cultural objects such as building walls, light poles than a total field magnetometer, VMG provides higher sensitivity and better resolution of near surface sources. Areas with significant amounts of buried metal typically produce anomalously steep magnetic gradients. However, because the gradiometer is sensitive to ferrous objects both above and below ground, site and vicinity surface conditions can affect survey results.

We used an SCINTREX ENVI-MAG magnetometer to obtain the vertical magnetic gradient data. The instrument features a built-in memory that stores the vertical magnetic gradient and survey grid information. The information can be up loaded to a computer for further processing.

Terrain Conductivity (TC)

The electrical conductivity of the near surface can be measured through electromagnetic induction (EM). A time varying high frequency signal (primary field) transmitted by a coil induces current flow in the earth. A secondary magnetic field associated with the current flow is detected by a second coil that is coplanar with the first. This secondary signal has both quadrature and in-phase components. The amplitude of the quadrature component is linearly proportional to the electrical conductivity of the subsurface, and is measured in units of milliSiemens/meter (mS/m). Since the measured value represents the conductivity of the volume of material sampled and not individual layers, it is an *apparent* value and is referred to as terrain conductivity. The in-phase component, on the other hand, is not linearly proportional to conductivity and so is expressed in units of parts-per-thousand (ppt) relative to a hypothetical reference receiving coil. This non-linear response makes the instrument particularly sensitive to metal objects.

Terrain conductivity values are useful in delineating areas of buried metal, contaminant plumes, and variations in soil type. Interpretation of TC data is similar to the VMG interpretation described above. Areas that are relatively free of metallic objects will result in smooth, evenly spaced contours. Areas containing buried metal will exhibit closely spaced contours that may locally form closures.

We used an Geonics EM-31 terrain conductivity meter to obtain the TC data. The instrument is connected to a digital data logger that stores the TC values and survey grid information. The information can be up loaded to a computer for further processing.

Metal Detection (MD)

The method is used to detect buried near surface metal objects such as rebar, manhole covers, and various metallic debris. This is done by holding a radio transmitter-receiver unit above the ground and continuously scanning the surface. The unit utilizes two orthogonal coils that are mounted on a common staff. One of the coils transmits an electromagnetic signal (primary magnetic field) which in turn produces a secondary magnetic field about the subsurface metal object. Since the receiver coil is orthogonal to the transmitter coil, it is unaffected by the primary field. Therefore, secondary magnetic fields produced by buried metal will generate an audible response from the unit. The peak of this response usually indicates when the unit is directly over the metal object. Our MD instrumentation for this investigation consisted of a Fisher TW-6 pipe and cable locator.

Ground Penetrating Radar (GPR)

Ground penetrating radar is a method that provides a continuous, high resolution cross-section depicting variations in the electrical properties of the shallow subsurface. The method is particularly sensitive to variations in electrical conductivity and electrical permittivity (the ability of a material to hold a charge when an electrical field is applied).

The system operates by repeatedly radiating an electromagnetic pulse into the ground from a transducer (antenna) as it is moved along a traverse. Since most earth materials are transparent to electromagnetic energy, only a portion of the radar signal is reflected back to the surface from interfaces representing variations in electrical properties. When the signal encounters a metal object, however, all of the incident energy is reflected. The reflected signals are received by the same transducer and are printed in cross-section form on a graphical recorder. Buried tanks, drums, and pipes often appear on the records as multiple inverted "V" images imbedded within the more or less horizontal banding produced by the hosting media. Depending upon depth and/or thickness the resulting records can provide information regarding the location of UST's, sumps, buried debris, underground utilities, and variations in the shallow site materials. Generally speaking, electrically conductive materials, such as clay, saturated silt, and rebar can limit radar performance by either damping and or scattering the radar signal.

For this investigation, we used a Geophysical Survey Systems, Inc. SIR-2 Subsurface Interface Radar System equipped with a 500 megahertz (MHz) transducer. This transducer usually provides both the resolution and depth penetration for characterizing the shallow depths.

DATA ANALYSIS

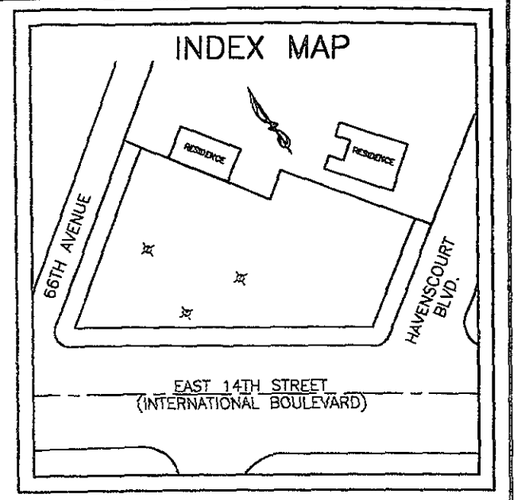
Computer Processing

We up-loaded the VMG and TC data to a portable computer and converted them into a format suitable for contouring. The contouring program then calculated an evenly spaced array of values (data grid) based on the observed field data. Finally, these gridded values were contoured to produce the VMG and TC Contour Maps.

Contour Map Interpretation

Generally speaking, VMG and TC contour maps have many similarities and as a result their interpretation is also similar, even though they are based on different physical phenomena. Both VMG and TC values vary smoothly throughout a given region with uniform conditions. Areas where variations are strong are defined by closely spaced contours and are typically considered anomalous when there are no obvious above ground sources. If the source of a particular anomaly is an isolated object or a group of closely spaced objects, the contours may form circular or elliptical closures. A large accumulation of buried objects may appear as a group of closely spaced anomalies or one large anomaly.

Actual anomaly magnitude and shape are dependent on the relative position and size of the buried objects of features with respect to the location of the data points. In general, anomaly magnitude will decrease and anomaly width will increase as distance (depth) to the source increases. VMG anomalies do differ from TC anomalies in a significant way, however. By and large, VMG anomalies are of higher intensity and smaller extent than TC anomalies. In addition, VMG anomalies often have paired high and low values creating what are known as magnetic dipoles, while TC anomalies usually do not.



66TH AVENUE

MW-3

MW-8

MW-2

SIDEWALK

HAVENSCOURT BOULEVARD

INTERNATIONAL BOULEVARD

LEGEND	
– – –	LIMITS OF VERTICAL MAGNETIC GRADIENT AND TERRAIN CONDUCTIVITY INVESTIGATIONS
———	GPR TRAVERSE
– –UU– –	UNDIFFERENTIATED UTILITY
	METAL DETECTOR ANOMALY
	MONITORING WELL
——x——	CHAIN–LINK FENCE

SCALE
0 10 20 40
(1 inch = 20 feet)

NORCAL

GENERALIZED SITE MAP
6600 INTERNATIONAL BOULEVARD

LOCATION: OAKLAND, CALIFORNIA

CLIENT: CLAYTON ENVIRONMENTAL CONSULTANTS

NORCAL GEOPHYSICAL CONSULTANTS INC.

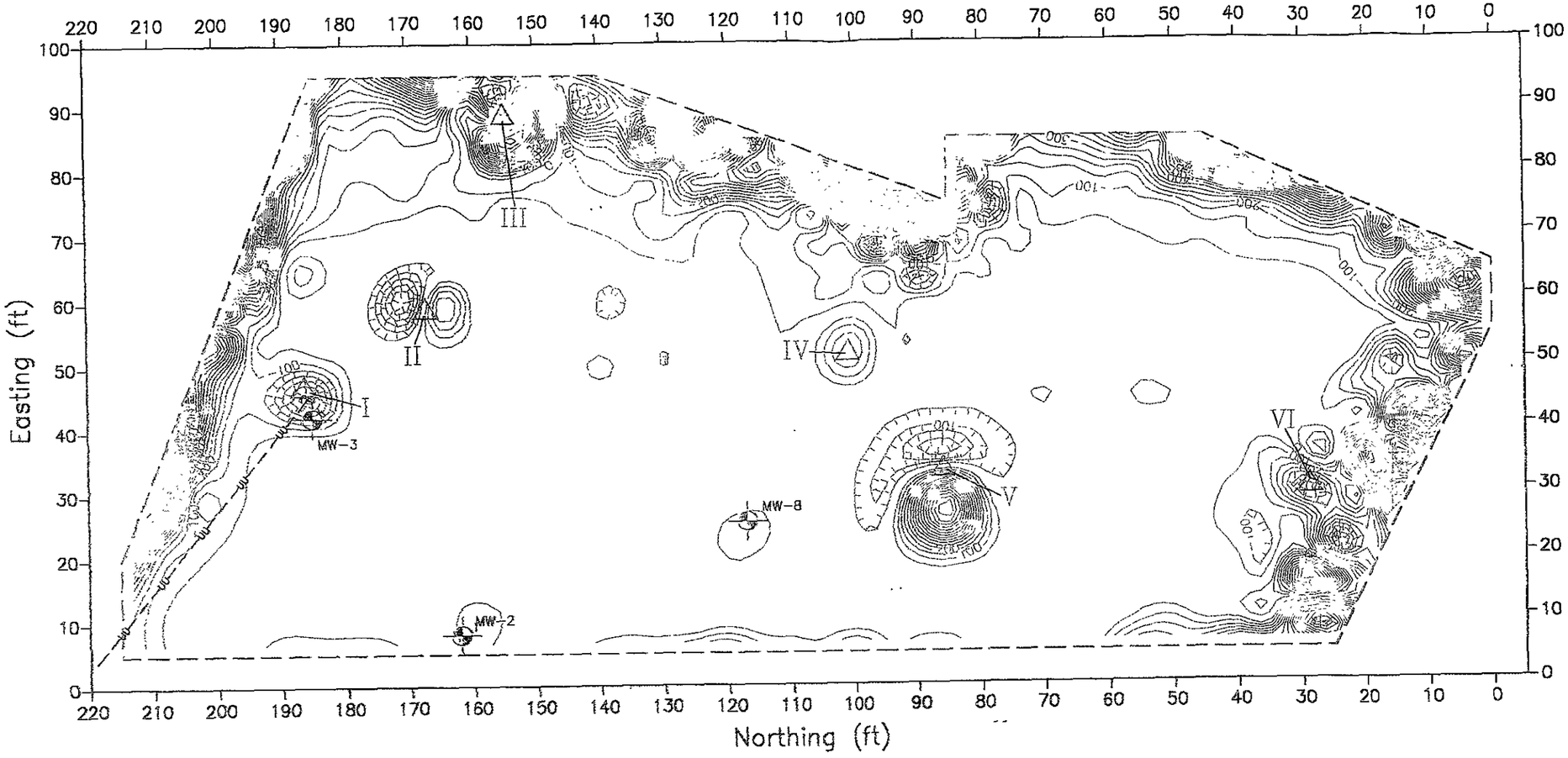
JOB #: 99–304.05

DATE: NOV. 1999

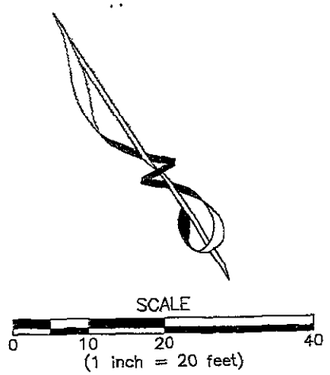
DRAWN BY: G.RANDALL

APPROVED BY: DJB

PLATE 1



LEGEND	
	LIMITS OF VERTICAL MAGNETIC GRADIENT INVESTIGATION
	VERTICAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 50 nT/m)
△	SUSPECTED BURIED FERROUS OBJECT
	UNDIFFERENTIATED UTILITY
⊕	MONITORING WELL



NORCAL

VERTICAL MAGNETIC GRADIENT CONTOUR MAP 6600 INTERNATIONAL BOULEVARD

LOCATION: OAKLAND, CALIFORNIA

CLIENT: CLAYTON ENVIRONMENTAL CONSULTANTS

NORCAL GEOPHYSICAL CONSULTANTS INC.

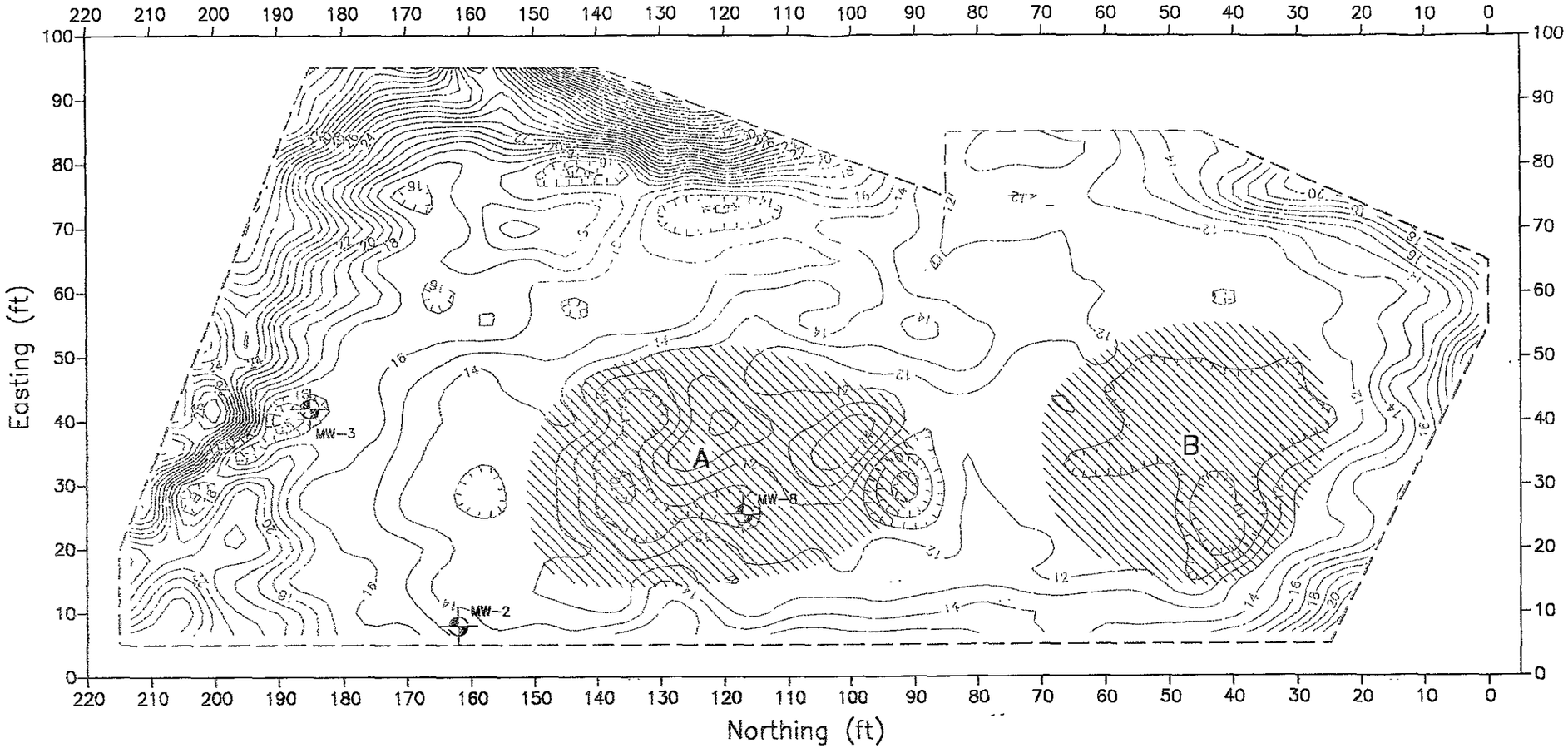
JOB #: 99-304.05

DATE: NOV. 1999

DRAWN BY: G.RANDALL

APPROVED BY: DJB

PLATE 2



LEGEND

— — —	LIMITS OF TERRAIN CONDUCTIVITY INVESTIGATION
—0—	TERRAIN CONDUCTIVITY CONTOUR (CONTOUR INTERVAL = 1 mS/m)
▨	ZONES OF POSSIBLE BACKFILL
⊕	MONITORING WELLS

SCALE
0 10 20 40
(1 inch = 20 feet)

NORCAL

TERRAIN CONDUCTIVITY CONTOUR MAP 6600 INTERNATIONAL BOULEVARD

LOCATION: OAKLAND, CALIFORNIA
CLIENT: CLAYTON ENVIRONMENTAL CONSULTANTS
NORCAL GEOPHYSICAL CONSULTANTS INC.
JOB #: 99-304.05
DATE: NOV. 1999
DRAWN BY: G.RANDALL
APPROVED BY: DJB

PLATE 3

APPENDIX D

SUMMARY OF SOIL BORING DATA

Clayton GROUP SERVICES

SUMMARY OF SOIL BORING DATA

Boring No.	Purpose	TD (feet)	Description	PID Readings (ppm)	
B-1	Characterize downgradient soil and groundwater on Parcel One.	15'	Fill: surface to 1.0'. Native soil: 1.0' to TD. Groundwater: 10'. Physical contamination: none.	1'=0.0 3'=0.0 5'=0.6 7'=0.0	9'=0.0 11'=0.0 15'=0.0
B-2	Characterize downgradient soil and groundwater on Parcel One.	14.75'	Fill: none. Native soil: surface to TD. Groundwater: 10.5'. Physical contamination: odor/stain below 10.5'.	3'=0.0 5'=0.8 7'=0.3	9'=0.0 11'=1.4 15'=0.3
B-3	Characterize downgradient soil and groundwater on Parcel One.	15'	Fill: none. Native soil: surface to TD. Groundwater: none after drilling, but present during sampling. Physical contamination: odor/stain below 10.5'.	1'=0.0 3'=0.0 5'=0.0 7'=1.1	9'=10.3 11'=2.4 15'=61.2
B-4	Characterize downgradient soil and groundwater on Parcel One.	16'	Fill: none. Native soil: surface to TD. Groundwater: 12.5'. Physical contamination: odor/stain below 11.5'.	2'=0.8 4'=1.1 6'=0.1	8'=1.4 12'=4.9 14'=5.7
B-5	Characterize soil and groundwater in center of Area B on Parcel One.	16'	Fill: none. Native soil: surface to TD. Groundwater: none after drilling, but present during sampling. Physical contamination: none.	2'=0.0 4'=0.0 6'=0.0	8'=0.0 12'=0.0
B-6	Characterize extent of Area B on Parcel One.	4.0'	Fill: surface to 1.0'. Native soil: 1.0' to TD. Groundwater: none. Physical contamination: none.	2'=1.1	4'=1.6
B-7	Characterize extent of Area B on Parcel One.	4.0'	Fill: surface to 1.0'. Native soil: 1.0' to TD. Groundwater: none. Physical contamination: none.	2'=3.7	4'=3.9
B-8	Characterize extent of Area B on Parcel One.	4.0'	Fill: surface to 1.0'. Native soil: 1.0' to TD. Groundwater: none. Physical contamination: none.	2'=2.6	4'=0.0
B-9	Characterize extent of Area B on Parcel One.	4.0'	Fill: surface to 1.0'. Native soil: 1.0' to TD. Groundwater: none. Physical contamination: none.	4'=0.0	

Clayton GROUP SERVICES

SUMMARY OF SOIL BORING DATA
Continued

Boring No.	Purpose	TD (feet)	Description	PID Readings (ppm)	
B-10	Characterize extent of Area A on Parcel Two.	8.0'	Fill: surface to 5.5'. Native soil: 5.5' to TD. Groundwater: none. Physical contamination: none.	4'=1.6	6'=0.8
B-11	Characterize extent of Area A on Parcel Two.	4.0'	Fill: surface to 2.5'. Native soil: 2.5' to TD. Groundwater: none. Physical contamination: none.	2'=2.1	4'=10.0
B-12	Characterize extent of Area A on Parcel Two.	4.0'	Fill: surface to 2.0' Native soil: 2.0' to TD. Groundwater: none. Physical contamination: none	2'=8.5	4'=5.7
B-13	Characterize extent of Area A on Parcel Two.	4.0'	Fill: surface to 0.5'. Native soil: 0.5' to TD. Groundwater: none. Physical contamination: none	2'=4.2	4'=8.5
B-14	Characterize extent of Area A on Parcel Two.	16'	Fill: surface to 9.0'. Native soil: 9.0' to TD. Groundwater: 9.0'. Physical contamination: odor/sheen below 9.0'.	2'=7.7 4'=3.4 6'=24.3 8'=1.1	9'=45.8 14'=203.4 16'=19.4

Legend:

TD = Total depth of boring

' = Foot

ppm = Parts per million

Fill = Non-native silty sands and sandy gravels

Native soil = *Vadose Zone* consists of brown to black, generally moist silty clay and clayey silt with some tan to brown sandy areas and some gravels; root structures observable. *Saturated Zone* consists of brown clayey sand and sandy gravels.

APPENDIX E

LABORATORY ANALYTICAL DATA SHEETS

Clayton
6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Attn.: Mr. John Glover

Dear John

Attached is our report for your samples received on Friday December 3, 1999
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after January 2, 2000 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919

Sincerely,

Afsaneh Salimpour

Volatile Organic Compounds

Clayton

Attn: John Glover

Project #: 70-00399.01

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Phone: (925) 426-2690 Fax: (925) 426-0106

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-1	Water	12/01/1999	1
B-2	Water	12/01/1999	2
B-3	Water	12/02/1999	3
B-4	Water	12/02/1999	4
B-5	Water	12/02/1999	5

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**B-1**	Lab Sample ID:	**1999-12-0083-001**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 15:38
Sampled:	12/01/1999	QC-Batch:	1999/12/09-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	12/09/1999 15:38	
Benzene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Bromoform	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Bromomethane	ND	1.0	ug/L	1.00	12/09/1999 15:38	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Chlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Chloroethane	ND	1.0	ug/L	1.00	12/09/1999 15:38	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/09/1999 15:38	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Chloroform	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Chloromethane	ND	1.0	ug/L	1.00	12/09/1999 15:38	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/09/1999 15:38	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Dibromomethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
2-Hexanone	ND	50	ug/L	1.00	12/09/1999 15:38	
Methylene chloride	ND	5.0	ug/L	1.00	12/09/1999 15:38	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/09/1999 15:38	
Naphthalene	ND	1.0	ug/L	1.00	12/09/1999 15:38	
Styrene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Tetrachloroethene	ND	0.50	ug/L	1.00	12/09/1999 15:38	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**B-1**	Lab Sample ID:	**1999-12-0083-001**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 15:38
Sampled:	12/01/1999	QC-Batch:	1999/12/09-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Toluene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Trichloroethene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Vinyl acetate	ND	5.0	ug/L	1.00	12/09/1999 15:38	
Vinyl chloride	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Total xylenes	ND	1.0	ug/L	1.00	12/09/1999 15:38	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Carbon disulfide	ND	1.0	ug/L	1.00	12/09/1999 15:38	
Isopropylbenzene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Bromobenzene	ND	0.50	ug/L	1.00	12/09/1999 15:38	
Bromochloromethane	ND	1.0	ug/L	1.00	12/09/1999 15:38	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/09/1999 15:38	
MTBE	ND	5.0	ug/L	1.00	12/09/1999 15:38	
Surrogate(s)						
4-Bromofluorobenzene	103.3	86-115	%	1.00	12/09/1999 15:38	
1,2-Dichloroethane-d4	87.7	76-114	%	1.00	12/09/1999 15:38	
Toluene-d8	94.9	88-110	%	1.00	12/09/1999 15:38	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**B-2**	Lab Sample ID:	**1999-12-0083-002**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 16:16
Sampled:	12/01/1999	QC-Batch:	1999/12/09-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	70	50	ug/L	1.00	12/09/1999 16:16	
Benzene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Bromoform	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Bromomethane	ND	1.0	ug/L	1.00	12/09/1999 16:16	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Chlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Chloroethane	ND	1.0	ug/L	1.00	12/09/1999 16:16	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/09/1999 16:16	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Chloroform	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Chloromethane	ND	1.0	ug/L	1.00	12/09/1999 16:16	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/09/1999 16:16	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Dibromomethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
2-Hexanone	ND	50	ug/L	1.00	12/09/1999 16:16	
Methylene chloride	ND	5.0	ug/L	1.00	12/09/1999 16:16	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/09/1999 16:16	
Naphthalene	ND	1.0	ug/L	1.00	12/09/1999 16:16	
Styrene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Tetrachloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:16	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**B-2**	Lab Sample ID:	**1999-12-0083-002**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 16:16
Sampled:	12/01/1999	QC-Batch:	1999/12/09-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Toluene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Trichloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Vinyl acetate	ND	5.0	ug/L	1.00	12/09/1999 16:16	
Vinyl chloride	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Total xylenes	ND	1.0	ug/L	1.00	12/09/1999 16:16	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Carbon disulfide	ND	1.0	ug/L	1.00	12/09/1999 16:16	
Isopropylbenzene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Bromobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:16	
Bromochloromethane	ND	1.0	ug/L	1.00	12/09/1999 16:16	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/09/1999 16:16	
MTBE	ND	5.0	ug/L	1.00	12/09/1999 16:16	
Surrogate(s)						
4-Bromofluorobenzene	99.4	86-115	%	1.00	12/09/1999 16:16	
1,2-Dichloroethane-d4	86.8	76-114	%	1.00	12/09/1999 16:16	
Toluene-d8	92.7	88-110	%	1.00	12/09/1999 16:16	

To: **Clayton**

Attn.: John Glover

Test Method: 8260A

Prep Method: 5030

Volatile Organic Compounds

Sample ID: **B-3**

Project: 70-00399.01

Sampled: 12/02/1999

Matrix: Water

Lab Sample ID: **1999-12-0083-003**

Received: 12/03/1999 18:20

Extracted: 12/09/1999 16:55

QC-Batch: 1999/12/09-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	290	50	ug/L	1.00	12/09/1999 16:55	
Benzene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Bromoform	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Bromomethane	ND	1.0	ug/L	1.00	12/09/1999 16:55	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Chlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Chloroethane	ND	1.0	ug/L	1.00	12/09/1999 16:55	
2-Butanone(MEK)	54	50	ug/L	1.00	12/09/1999 16:55	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Chloroform	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Chloromethane	ND	1.0	ug/L	1.00	12/09/1999 16:55	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/09/1999 16:55	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Dibromomethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Ethylbenzene	8.7	0.50	ug/L	1.00	12/09/1999 16:55	
2-Hexanone	ND	50	ug/L	1.00	12/09/1999 16:55	
Methylene chloride	ND	5.0	ug/L	1.00	12/09/1999 16:55	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/09/1999 16:55	
Naphthalene	2.6	1.0	ug/L	1.00	12/09/1999 16:55	
Styrene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Tetrachloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:55	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**B-3**	Lab Sample ID:	**1999-12-0083-003**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 16:55
Sampled:	12/02/1999	QC-Batch:	1999/12/09-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Toluene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Trichloroethene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Vinyl acetate	ND	5.0	ug/L	1.00	12/09/1999 16:55	
Vinyl chloride	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Total xylenes	1.5	1.0	ug/L	1.00	12/09/1999 16:55	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Carbon disulfide	ND	1.0	ug/L	1.00	12/09/1999 16:55	
Isopropylbenzene	24	0.50	ug/L	1.00	12/09/1999 16:55	
Bromobenzene	ND	0.50	ug/L	1.00	12/09/1999 16:55	
Bromochloromethane	ND	1.0	ug/L	1.00	12/09/1999 16:55	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/09/1999 16:55	
MTBE	18	5.0	ug/L	1.00	12/09/1999 16:55	
Surrogate(s)						
4-Bromofluorobenzene	100.2	86-115	%	1.00	12/09/1999 16:55	
1,2-Dichloroethane-d4	93.5	76-114	%	1.00	12/09/1999 16:55	
Toluene-d8	92.5	88-110	%	1.00	12/09/1999 16:55	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**B-4**	Lab Sample ID:	**1999-12-0083-004**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 17:33
Sampled:	12/02/1999	QC-Batch:	1999/12/09-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	170	50	ug/L	1.00	12/09/1999 17:33	
Benzene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Bromoform	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Bromomethane	ND	1.0	ug/L	1.00	12/09/1999 17:33	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Chlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Chloroethane	ND	1.0	ug/L	1.00	12/09/1999 17:33	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/09/1999 17:33	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Chloroform	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Chloromethane	ND	1.0	ug/L	1.00	12/09/1999 17:33	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/09/1999 17:33	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Dibromomethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Ethylbenzene	3.7	0.50	ug/L	1.00	12/09/1999 17:33	
2-Hexanone	ND	50	ug/L	1.00	12/09/1999 17:33	
Methylene chloride	ND	5.0	ug/L	1.00	12/09/1999 17:33	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/09/1999 17:33	
Naphthalene	ND	1.0	ug/L	1.00	12/09/1999 17:33	
Styrene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Tetrachloroethene	ND	0.50	ug/L	1.00	12/09/1999 17:33	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**B-4**	Lab Sample ID:	**1999-12-0083-004**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 17:33
Sampled:	12/02/1999	QC-Batch:	1999/12/09-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Toluene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Trichloroethene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Vinyl acetate	ND	5.0	ug/L	1.00	12/09/1999 17:33	
Vinyl chloride	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Total xylenes	1.2	1.0	ug/L	1.00	12/09/1999 17:33	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Carbon disulfide	ND	1.0	ug/L	1.00	12/09/1999 17:33	
Isopropylbenzene	18	0.50	ug/L	1.00	12/09/1999 17:33	
Bromobenzene	ND	0.50	ug/L	1.00	12/09/1999 17:33	
Bromochloromethane	ND	1.0	ug/L	1.00	12/09/1999 17:33	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/09/1999 17:33	
MTBE	8.2	5.0	ug/L	1.00	12/09/1999 17:33	
Surrogate(s)						
4-Bromofluorobenzene	100.4	86-115	%	1.00	12/09/1999 17:33	
1,2-Dichloroethane-d4	88.0	76-114	%	1.00	12/09/1999 17:33	
Toluene-d8	95.1	88-110	%	1.00	12/09/1999 17:33	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**B-5**	Lab Sample ID:	**1999-12-0083-005**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 18:12
Sampled:	12/02/1999	QC-Batch:	1999/12/09-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	12/09/1999 18:12	
Benzene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Bromoform	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Bromomethane	ND	1.0	ug/L	1.00	12/09/1999 18:12	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Chlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Chloroethane	ND	1.0	ug/L	1.00	12/09/1999 18:12	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/09/1999 18:12	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Chloroform	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Chloromethane	ND	1.0	ug/L	1.00	12/09/1999 18:12	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/09/1999 18:12	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Dibromomethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
2-Hexanone	ND	50	ug/L	1.00	12/09/1999 18:12	
Methylene chloride	ND	5.0	ug/L	1.00	12/09/1999 18:12	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/09/1999 18:12	
Naphthalene	ND	1.0	ug/L	1.00	12/09/1999 18:12	
Styrene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Tetrachloroethene	ND	0.50	ug/L	1.00	12/09/1999 18:12	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**B-5**	Lab Sample ID:	**1999-12-0083-005**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 18:12
Sampled:	12/02/1999	QC-Batch:	1999/12/09-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Toluene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Trichloroethene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Vinyl acetate	ND	5.0	ug/L	1.00	12/09/1999 18:12	
Vinyl chloride	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Total xylenes	ND	1.0	ug/L	1.00	12/09/1999 18:12	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Carbon disulfide	ND	1.0	ug/L	1.00	12/09/1999 18:12	
Isopropylbenzene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Bromobenzene	ND	0.50	ug/L	1.00	12/09/1999 18:12	
Bromochloromethane	ND	1.0	ug/L	1.00	12/09/1999 18:12	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/09/1999 18:12	
MTBE	ND	5.0	ug/L	1.00	12/09/1999 18:12	
Surrogate(s)						
4-Bromofluorobenzene	106.6	86-115	%	1.00	12/09/1999 18:12	
1,2-Dichloroethane-d4	82.8	76-114	%	1.00	12/09/1999 18:12	
Toluene-d8	91.9	88-110	%	1.00	12/09/1999 18:12	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Batch QC Report

Volatile Organic Compounds

Method Blank | **Water** | **QC Batch # 1999/12/09-01.09**

MB: 1999/12/09-01.09-001 | Date Extracted: 12/09/1999 11:52

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Acetone	ND	50	ug/L	12/09/1999 11:52	
Benzene	ND	0.5	ug/L	12/09/1999 11:52	
Bromodichloromethane	ND	0.5	ug/L	12/09/1999 11:52	
Bromoform	ND	0.5	ug/L	12/09/1999 11:52	
Bromomethane	ND	1.0	ug/L	12/09/1999 11:52	
Carbon tetrachloride	ND	0.5	ug/L	12/09/1999 11:52	
Chlorobenzene	ND	0.5	ug/L	12/09/1999 11:52	
Chloroethane	ND	1.0	ug/L	12/09/1999 11:52	
2-Butanone(MEK)	ND	50	ug/L	12/09/1999 11:52	
2-Chloroethylvinyl ether	ND	0.5	ug/L	12/09/1999 11:52	
Chloroform	ND	0.5	ug/L	12/09/1999 11:52	
Chloromethane	ND	1.0	ug/L	12/09/1999 11:52	
Dibromochloromethane	ND	0.5	ug/L	12/09/1999 11:52	
1,2-Dichlorobenzene	ND	0.5	ug/L	12/09/1999 11:52	
1,3-Dichlorobenzene	ND	0.5	ug/L	12/09/1999 11:52	
1,4-Dichlorobenzene	ND	0.5	ug/L	12/09/1999 11:52	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	12/09/1999 11:52	
1,2-Dibromoethane	ND	0.5	ug/L	12/09/1999 11:52	
Dibromomethane	ND	0.5	ug/L	12/09/1999 11:52	
Dichlorodifluoromethane	ND	0.5	ug/L	12/09/1999 11:52	
1,1-Dichloroethane	ND	0.5	ug/L	12/09/1999 11:52	
1,2-Dichloroethane	ND	0.5	ug/L	12/09/1999 11:52	
1,1-Dichloroethene	ND	0.5	ug/L	12/09/1999 11:52	
cis-1,2-Dichloroethene	ND	0.5	ug/L	12/09/1999 11:52	
trans-1,2-Dichloroethene	ND	0.5	ug/L	12/09/1999 11:52	
1,2-Dichloropropane	ND	0.5	ug/L	12/09/1999 11:52	
cis-1,3-Dichloropropene	ND	0.5	ug/L	12/09/1999 11:52	
trans-1,3-Dichloropropene	ND	0.5	ug/L	12/09/1999 11:52	
Ethylbenzene	ND	0.5	ug/L	12/09/1999 11:52	
2-Hexanone	ND	50	ug/L	12/09/1999 11:52	
Methylene chloride	ND	5.0	ug/L	12/09/1999 11:52	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	12/09/1999 11:52	
Naphthalene	ND	1.0	ug/L	12/09/1999 11:52	
Styrene	ND	0.5	ug/L	12/09/1999 11:52	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	12/09/1999 11:52	
Tetrachloroethene	ND	0.5	ug/L	12/09/1999 11:52	
Toluene	ND	0.5	ug/L	12/09/1999 11:52	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Batch QC Report
Volatile Organic Compounds

Method Blank | **Water** | **QC Batch # 1999/12/09-01.09**

MB: 1999/12/09-01.09-001 | Date Extracted: 12/09/1999 11:52

Compound	Result	Rep.Limit	Units	Analyzed	Flag
1,1,1-Trichloroethane	ND	0.5	ug/L	12/09/1999 11:52	
1,1,2-Trichloroethane	ND	0.5	ug/L	12/09/1999 11:52	
Trichloroethene	ND	0.5	ug/L	12/09/1999 11:52	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	12/09/1999 11:52	
Vinyl acetate	ND	5.0	ug/L	12/09/1999 11:52	
Vinyl chloride	ND	0.5	ug/L	12/09/1999 11:52	
Total xylenes	ND	1.0	ug/L	12/09/1999 11:52	
Trichlorotrifluoroethane	ND	0.5	ug/L	12/09/1999 11:52	
Carbon disulfide	ND	1.0	ug/L	12/09/1999 11:52	
Isopropylbenzene	ND	0.5	ug/L	12/09/1999 11:52	
Bromobenzene	ND	0.5	ug/L	12/09/1999 11:52	
Bromochloromethane	ND	1.0	ug/L	12/09/1999 11:52	
Trichlorofluoromethane	ND	2.0	ug/L	12/09/1999 11:52	
MTBE	ND	5.0	ug/L	12/09/1999 11:52	
Surrogate(s)					
4-Bromofluorobenzene	104.8	86-115	%	12/09/1999 11:52	
1,2-Dichloroethane-d4	88.0	76-114	%	12/09/1999 11:52	
Toluene-d8	93.2	88-110	%	12/09/1999 11:52	

To: **Clayton**
Attn: John Glover

Test Method: 8260A
Prep Method: 5030

Batch QC Report

Volatile Organic Compounds

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/09-01.09**

LCS: 1999/12/09-01.09-002 Extracted: 12/09/1999 10:28 Analyzed: 12/09/1999 10:28
LCSD: 1999/12/09-01.09-003 Extracted: 12/09/1999 11:14 Analyzed: 12/09/1999 11:14

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	43.2	45.2	50.0	50.0	86.4	90.4	4.5	69-129	20		
Chlorobenzene	55.7	56.3	50.0	50.0	111.4	112.6	1.1	61-121	20		
1,1-Dichloroethene	48.6	43.3	50.0	50.0	97.2	86.6	11.5	65-125	20		
Toluene	42.4	44.2	50.0	50.0	84.8	88.4	4.2	70-130	20		
Trichloroethene	41.3	42.0	50.0	50.0	82.6	84.0	1.7	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	527	515	500	500	105.4	103.0		86-115			
1,2-Dichloroethane-d4	421	456	500	500	84.2	91.2		76-114			
Toluene-d8	450	466	500	500	90.0	93.2		88-110			

CHROMALAB, INC.
Environmental Services (SDB)

Submission #: 1999-12-0083

Volatile Hydrocarbons by 8015/8020

Clayton

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Attn: John Glover

Phone: (925) 426-2690 Fax: (925) 426-0106

Project #: 70-00399.01

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-1	Water	12/01/1999	1
B-2	Water	12/01/1999	2
B-3	Water	12/02/1999	3
B-4	Water	12/02/1999	4
B-5	Water	12/02/1999	5

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**B-1**	Lab Sample ID:	**1999-12-0083-001**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/07/1999 22:19
Sampled:	12/01/1999	QC-Batch:	1999/12/07-01.02
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/07/1999 22:19	
Surrogate(s)						
4-Bromofluorobenzene-FID	79.6	50-150	%	1.00	12/07/1999 22:19	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**B-2**	Lab Sample ID:	**1999-12-0083-002**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/07/1999 22:48
Sampled:	12/01/1999	QC-Batch:	1999/12/07-01.02
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	1300	50	ug/L	1.00	12/07/1999 22:48	g
Surrogate(s)						
4-Bromofluorobenzene-FID	137.4	50-150	%	1.00	12/07/1999 22:48	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**B-3**	Lab Sample ID:	**1999-12-0083-003**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/07/1999 23:16
Sampled:	12/02/1999	QC-Batch:	1999/12/07-01.02
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	1700	50	ug/L	1.00	12/07/1999 23:16	g
Surrogate(s)						
4-Bromofluorobenzene-FID	207.0	50-150	%	1.00	12/07/1999 23:16	sh

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**B-4**	Lab Sample ID:	**1999-12-0083-004**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/08/1999 03:38
Sampled:	12/02/1999	QC-Batch:	1999/12/07-01.02
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	890	50	ug/L	1.00	12/08/1999 03:38	g
Surrogate(s)						
4-Bromofluorobenzene-FID	94.4	50-150	%	1.00	12/08/1999 03:38	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**B-5**	Lab Sample ID:	**1999-12-0083-005**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/09/1999 05:33
Sampled:	12/02/1999	QC-Batch:	1999/12/08-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/1999 05:33	
Surrogate(s)						
4-Bromofluorobenzene-FID	58.5	50-150	%	1.00	12/09/1999 05:33	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Method Blank **Water** **QC Batch # 1999/12/07-01.02**

MB: 1999/12/07-01.02-001 Date Extracted: 12/07/1999 09:29

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	12/07/1999 09:29	
Surrogate(s)					
4-Bromofluorobenzene-FID	100.6	50-150	%	12/07/1999 09:29	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Method Blank | **Water** | **QC Batch # 1999/12/08-01.05**

MB: 1999/12/08-01.05-001

Date Extracted: 12/08/1999 09:12

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	12/08/1999 09:12	
Surrogate(s)					
4-Bromofluorobenzene-FID	69.8	50-150	%	12/08/1999 09:12	

To: **Clayton**

Attn: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/07-01.02**

LCS: 1999/12/07-01.02-002 Extracted: 12/07/1999 07:35 Analyzed: 12/07/1999 07:35

LCSD: 1999/12/07-01.02-003 Extracted: 12/07/1999 08:04 Analyzed: 12/07/1999 08:04

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	473	555	500	500	94.6	111.0	16.0	75-125	20		
Surrogate(s)											
4-Bromofluorobenzene-FI	522	527	500	500	104.4	105.4		50-150			

To: **Clayton**

Attn: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/08-01.05**

LCS: 1999/12/08-01.05-002 Extracted: 12/08/1999 09:44 Analyzed: 12/08/1999 09:44

LCSD: 1999/12/08-01.05-003 Extracted: 12/08/1999 10:17 Analyzed: 12/08/1999 10:17

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	505	501	500	500	101.0	100.2	0.8	75-125	20		
Surrogate(s)											
4-Bromofluorobenzene-FI	402	399	500	500	80.4	79.8		50-150			

To: **Clayton**

Attn:John Glover

Test Method: 8015M
8020

Prep Method: 5030

Legend & Notes

Volatile Hydrocarbons by 8015/8020

Analyte Flags

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

sh

Surrogate recoveries were higher than QC limits due to matrix interference.

Soluble Metals

Clayton

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Attn: John Glover

Phone: (925) 426-2690 Fax: (925) 426-0106

Project #: 70-00399.01

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-1	Water	12/01/1999	1
B-2	Water	12/01/1999	2
B-3	Water	12/02/1999	3
B-5	Water	12/02/1999	5

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3005A

Soluble Metals

Sample ID:	**B-1**	Lab Sample ID:	**1999-12-0083-001**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/07/1999 07:20
Sampled:	12/01/1999	QC-Batch:	1999/12/07-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.0020	mg/L	1.00	12/07/1999 12:10	
Chromium	ND	0.0050	mg/L	1.00	12/07/1999 12:10	
Lead	ND	0.0050	mg/L	1.00	12/07/1999 12:10	
Nickel	0.0051	0.0050	mg/L	1.00	12/07/1999 12:10	
Zinc	0.015	0.010	mg/L	1.00	12/07/1999 12:10	

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3005A

Soluble Metals

Sample ID:	**B-2**	Lab Sample ID:	**1999-12-0083-002**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/07/1999 07:20
Sampled:	12/01/1999	QC-Batch:	1999/12/07-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.0020	mg/L	1.00	12/07/1999 12:22	
Chromium	ND	0.0050	mg/L	1.00	12/07/1999 12:22	
Lead	ND	0.0050	mg/L	1.00	12/07/1999 12:22	
Nickel	0.0083	0.0050	mg/L	1.00	12/07/1999 12:22	
Zinc	0.018	0.010	mg/L	1.00	12/07/1999 12:22	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-12-0083

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3005A

Soluble Metals

Sample ID:	**B-3**	Lab Sample ID:	**1999-12-0083-003**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/07/1999 07:20
Sampled:	12/02/1999	QC-Batch:	1999/12/07-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.0020	mg/L	1.00	12/07/1999 12:26	
Chromium	ND	0.0050	mg/L	1.00	12/07/1999 12:26	
Lead	ND	0.0050	mg/L	1.00	12/07/1999 12:26	
Nickel	0.013	0.0050	mg/L	1.00	12/07/1999 12:26	
Zinc	0.017	0.010	mg/L	1.00	12/07/1999 12:26	

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3005A

Soluble Metals

Sample ID:	**B-5**	Lab Sample ID:	**1999-12-0083-005**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/07/1999 07:20
Sampled:	12/02/1999	QC-Batch:	1999/12/07-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.0020	mg/L	1.00	12/07/1999 12:30	
Chromium	ND	0.0050	mg/L	1.00	12/07/1999 12:30	
Lead	ND	0.0050	mg/L	1.00	12/07/1999 12:30	
Nickel	0.028	0.0050	mg/L	1.00	12/07/1999 12:30	
Zinc	0.031	0.010	mg/L	1.00	12/07/1999 12:30	

To: **Clayton**

Attn: John Glover

Test Method: 6010B

Prep Method: 3005A

Batch QC Report

Soluble Metals

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/07-01.15**

LCS: 1999/12/07-01.15-036 Extracted: 12/07/1999 07:20 Analyzed: 12/07/1999 12:03

LCSD: 1999/12/07-01.15-037 Extracted: 12/07/1999 07:20 Analyzed: 12/07/1999 12:07

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Cadmium	0.471	0.475	0.500	0.500	94.2	95.0	0.8	80-120	20		
Chromium	0.464	0.467	0.500	0.500	92.8	93.4	0.6	80-120	20		
Lead	0.478	0.482	0.500	0.500	95.6	96.4	0.8	80-120	20		
Nickel	0.479	0.482	0.500	0.500	95.8	96.4	0.6	80-120	20		
Zinc	0.499	0.505	0.500	0.500	99.8	101.0	1.2	80-120	20		

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3005A

Batch QC Report
Soluble Metals

Method Blank | **Water** | **QC Batch # 1999/12/07-01.15**

MB: 1999/12/07-01.15-035 | Date Extracted: 12/07/1999 07:20

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Cadmium	ND	0.0020	mg/L	12/07/1999 11:59	
Chromium	ND	0.0050	mg/L	12/07/1999 11:59	
Lead	ND	0.0050	mg/L	12/07/1999 11:59	
Nickel	ND	0.0050	mg/L	12/07/1999 11:59	
Zinc	ND	0.010	mg/L	12/07/1999 11:59	

To: **Clayton**

Attn.: John Glover

Test Method: 6010B

Prep Method: 3005A

Batch QC Report

Soluble Metals

Matrix Spike (MS / MSD) **Water** **QC Batch # 1999/12/07-01.15**

Sample ID: **B-1** Lab Sample ID: 1999-12-0083-001

MS: 1999/12/07-01.15-039 Extracted: 12/07/1999 07:20 Analyzed: 12/07/1999 12:14 Dilution: 1.0

MSD: 1999/12/07-01.15-040 Extracted: 12/07/1999 07:20 Analyzed: 12/07/1999 12:18 Dilution: 1.0

Compound	Conc. [mg/L]			Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Cadmium	0.457	0.463	ND	0.500	0.500	91.4	92.6	1.3	75-125	20		
Chromium	0.460	0.463	ND	0.500	0.500	92.0	92.6	0.7	75-125	20		
Lead	0.461	0.463	ND	0.500	0.500	92.2	92.6	0.4	75-125	20		
Nickel	0.466	0.470	0.00512	0.500	0.500	92.2	93.0	0.9	75-125	20		
Zinc	0.503	0.509	0.0147	0.500	0.500	97.7	98.9	1.2	75-125	20		

CHROMALAB, INC.
Environmental Services (SDB)

Submission #: 1999-12-0083

Total Extractable Petroleum Hydrocarbons (TEPH)

Clayton

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Attn: John Glover

Phone: (925) 426-2690 Fax: (925) 426-0106

Project #: 70-00399.01

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-1	Water	12/01/1999	1
B-5	Water	12/02/1999	5

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-12-0083

To: **Clayton**
Attn.: John Glover

Test Method: 8015m
Prep Method: 3510/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-1**	Lab Sample ID:	**1999-12-0083-001**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/08/1999 09:00
Sampled:	12/01/1999	QC-Batch:	1999/12/08-04.10
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	98	51	ug/L	1.01	12/10/1999 11:52	nhc
Motor Oil	ND	500	ug/L	1.00	12/10/1999 11:52	
Surrogate(s)						
o-Terphenyl	89.0	60-130	%	1.00	12/10/1999 11:52	

To: **Clayton**

Attn.: John Glover

Test Method: 8015m

Prep Method: 3510/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-5**	Lab Sample ID:	**1999-12-0083-005**
Project:	70-00399.01	Received:	12/03/1999 18:20
		Extracted:	12/08/1999 09:00
Sampled:	12/02/1999	QC-Batch:	1999/12/08-04.10
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	1300	51	ug/L	1.01	12/10/1999 12:39	ndp
Motor Oil	1600	500	ug/L	1.00	12/10/1999 12:39	
Surrogate(s)						
o-Terphenyl	99.8	60-130	%	1.00	12/10/1999 12:39	

To: **Clayton**
Attn.: John Glover

Test Method: 8015m
Prep Method: 3510/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Method Blank **Water** **QC Batch # 1999/12/08-04.10**

MB: 1999/12/08-04.10-001 Date Extracted: 12/08/1999 08:00

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	50	ug/L	12/09/1999 10:44	
Motor Oil	ND	500	ug/L	12/09/1999 10:44	
Surrogate(s)					
o-Terphenyl	91.0	60-130	%	12/09/1999 10:44	

To: **Clayton**
Attn: John Glover

Test Method: 8015m
Prep Method: 3510/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/08-04.10**

LCS: 1999/12/08-04.10-002 Extracted: 12/08/1999 08:00 Analyzed: 12/08/1999 16:23
LCSD: 1999/12/08-04.10-003 Extracted: 12/08/1999 08:00 Analyzed: 12/08/1999 16:59

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Diesel	1150	1180	1250	1250	92.0	94.4	2.6	60-130	25		
Surrogate(s)											
o-Terphenyl	19.3	19.4	20.0	20.0	96.5	97.0		60-130			

To: **Clayton**
Attn:John Glover

Test Method: 8015m
Prep Method: 3510/8015M

Legend & Notes

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte Flags

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

nhc

Compounds reported are in the Diesel range. They do not exhibit a pattern characteristic of hydrocarbon.

99-12-0083

Clayton LABORATORY SERVICES

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: 5 DAY
Rush Charges Authorized? ☐ Yes ☒ No
☐ Phone or ☐ Fax Results

Page 1 of 1
For Clayton Use Only
Clayton Lab Project No.

REPORT RESULTS TO
Name JOHN GLOVER
Company CLAYTON
Mailing Address 6920 KOLL CENTER PKWY #216
City, State, Zip PLEASANTON, CA 94566
Telephone No. FAX No.
Client Job No. 70-00391.01

SEND INVOICE TO
Purchase Order No.
Name
Company Dept.
Address
City, State, Zip

Special Instructions and/or specific regulatory requirements:
(method, limit of detection, etc.)

* Explanation of Preservative

Samples are:
(check if applicable)
☐ Drinking Water
☒ Groundwater
☐ Wastewater

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request. Enter a 'P' if Preservative added.*)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	8260 w/MTBE	TPH-G, BTEX, MTBE	5 METALS	FILTER METALS	TPH-D + MO						FOR LAB USE ONLY
B-1	12/1/99		GW		7	X	X	X	X	X						
B-2	12/1/99				4	X	X	X	X							
B-3	12/2/99				5	X	X	X	X							
B-4	12/2/99				3	X	X									
B-5	12/2/99				7	X	X	X	X	X						

CHAIN OF CUSTODY
Collected by: MARC MULLINEY (print) Collector's Signature: Marc Mulliney
Relinquished by: Marc Mulliney Date/Time 12/3/99 1820 Received by: Date/Time
Relinquished by: Date/Time Received by: Date/Time
Method of Shipment: Received at Lab by: Denise Harrington Date/Time 12/3/99 @ 1820
Sample Condition Upon Receipt: ☐ Acceptable ☐ Other (explain) 5.5°C

Authorized by: _____ Date _____
(Client Signature MUST Accompany Request)

Please return completed form and samples to one of the Clayton Group Services, Inc. labs listed below:

Detroit Regional Lab
22345 Roethel Drive
Novi, MI 48375
(800) 806-5887
(248) 344-1770
FAX (248) 344-2655

Atlanta Regional Lab
3380 Chastain Meadows Parkway, Suite 300
Kennesaw, GA 30144
(800) 252-9919
(770) 499-7500
FAX (770) 423-4990

Seattle Regional Lab
4636 E. Marginal Way S., Suite 215
Seattle, WA 98134
(800) 568-7755
(206) 763-7364
FAX (206) 763-4189

DISTRIBUTION:
White = Clayton Laboratory
Yellow = Clayton Accounting
Pink = Client Copy

9/97 20K

Clayton
6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Attn.: Mr. John Glover

Dear John

Attached is our report for your samples received on Thursday December 9, 1999
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after January 8, 2000 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919

Sincerely,

Vincent Vancil

Soluble CAM 17 Metals

Clayton

Attn: John Glover

Project #: 70-00399.01

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Phone: (925) 426-2690 Fax: (925) 426-0106

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-4	Water	12/05/1999	3

To: **Clayton**

Attn.: John Glover

Test Method: 6010B
7470A

Prep Method: 7470A
3010A

Soluble CAM 17 Metals

Sample ID:	**B-4**	Lab Sample ID:	**1999-12-0183-003**
Project:	70-00399.01	Received:	12/09/1999 16:25
		Extracted:	12/15/1999
Sampled:	12/05/1999	QC-Batch:	1999/12/15-03.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Antimony	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Arsenic	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Barium	0.18	0.0050	mg/L	1.00	12/16/1999 11:26	
Beryllium	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Cadmium	ND	0.0020	mg/L	1.00	12/16/1999 11:26	
Chromium	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Cobalt	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Copper	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Lead	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Molybdenum	0.083	0.0050	mg/L	1.00	12/16/1999 11:26	
Nickel	0.0050	0.0050	mg/L	1.00	12/16/1999 11:26	
Selenium	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Silver	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Thallium	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Vanadium	ND	0.0050	mg/L	1.00	12/16/1999 11:26	
Zinc	0.017	0.010	mg/L	1.00	12/16/1999 11:26	
Mercury	ND	0.00020	mg/L	1.00	12/16/1999 11:26	

To: **Clayton**

Attn.: John Glover

Test Method: 6010B
7470A

Prep Method: 7470A
3010A

Batch QC Report

Soluble CAM 17 Metals

Method Blank | **Water** | **QC Batch # 1999/12/15-01.16**

MB: 1999/12/15-01.16-011

Date Extracted: 12/15/1999 10:47

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Mercury	ND	0.0002	mg/L	12/15/1999 13:26	

To: **Clayton**

Attn.: John Glover

Test Method: 6010B
7470A

Prep Method: 7470A
3010A

Batch QC Report

Soluble CAM 17 Metals

Method Blank **Water** **QC Batch # 1999/12/15-03.15**

MB: 1999/12/15-03.15-083 Date Extracted: 12/15/1999 08:43

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Antimony	ND	0.0050	mg/L	12/15/1999 19:08	
Arsenic	ND	0.0050	mg/L	12/15/1999 19:08	
Barium	ND	0.0050	mg/L	12/15/1999 19:08	
Beryllium	ND	0.0050	mg/L	12/15/1999 19:08	
Cadmium	ND	0.0020	mg/L	12/15/1999 19:08	
Chromium	ND	0.0050	mg/L	12/15/1999 19:08	
Cobalt	ND	0.0050	mg/L	12/15/1999 19:08	
Copper	ND	0.0050	mg/L	12/15/1999 19:08	
Lead	ND	0.0050	mg/L	12/15/1999 19:08	
Molybdenum	ND	0.0050	mg/L	12/15/1999 19:08	
Nickel	ND	0.0050	mg/L	12/15/1999 19:08	
Selenium	ND	0.0050	mg/L	12/15/1999 19:08	
Thallium	ND	0.0050	mg/L	12/15/1999 19:08	
Vanadium	ND	0.0050	mg/L	12/15/1999 19:08	
Zinc	ND	0.010	mg/L	12/15/1999 19:08	

To: **Clayton**

Attn.: John Glover

Test Method: 6010B
7470A

Prep Method: 7470A
3010A

Batch QC Report

Soluble CAM 17 Metals

Method Blank **Water** **QC Batch # 1999/12/15-03.15**

MB: 1999/12/15-03.15-039 Date Extracted: 12/15/1999 08:43

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Silver	ND	0.0050	mg/L	12/16/1999 11:15	

To: **Clayton**

Attn: John Glover

Test Method: 7470A
6010B

Prep Method: 7470A
3010A

Batch QC Report

Soluble CAM 17 Metals

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/15-01.16**

LCS: 1999/12/15-01.16-012 Extracted: 12/15/1999 10:47 Analyzed: 12/15/1999 13:28

LCSD: 1999/12/15-01.16-013 Extracted: 12/15/1999 10:47 Analyzed: 12/15/1999 13:29

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Mercury	0.0209	0.0206	0.0200	0.0200	104.5	103.0	1.4	85-115	20		

To: **Clayton**

Attn: John Glover

Test Method: 7470A
6010B

Prep Method: 7470A
3010A

Batch QC Report

Soluble CAM 17 Metals

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/15-03.15**

LCS: 1999/12/15-03.15-084 Extracted: 12/15/1999 08:43 Analyzed: 12/15/1999 19:12

LCSD: 1999/12/15-03.15-085 Extracted: 12/15/1999 08:43 Analyzed: 12/15/1999 19:15

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Antimony	0.509	0.509	0.500	0.500	101.8	101.8	0.0	80-120	20		
Arsenic	0.493	0.494	0.500	0.500	98.6	98.8	0.2	80-120	20		
Barium	0.488	0.486	0.500	0.500	97.6	97.2	0.4	80-120	20		
Beryllium	0.497	0.491	0.500	0.500	99.4	98.2	1.2	80-120	20		
Cadmium	0.485	0.483	0.500	0.500	97.0	96.6	0.4	80-120	20		
Chromium	0.502	0.499	0.500	0.500	100.4	99.8	0.6	80-120	20		
Cobalt	0.490	0.489	0.500	0.500	98.0	97.8	0.2	80-120	20		
Copper	0.500	0.499	0.500	0.500	100.0	99.8	0.2	80-120	20		
Lead	0.493	0.492	0.500	0.500	98.6	98.4	0.2	80-120	20		
Molybdenum	0.488	0.487	0.500	0.500	97.6	97.4	0.2	80-120	20		
Nickel	0.491	0.489	0.500	0.500	98.2	97.8	0.4	80-120	20		
Selenium	0.486	0.486	0.500	0.500	97.2	97.2	0.0	80-120	20		
Thallium	0.484	0.483	0.500	0.500	96.8	96.6	0.2	80-120	20		
Vanadium	0.489	0.488	0.500	0.500	97.8	97.6	0.2	80-120	20		
Zinc	0.498	0.495	0.500	0.500	99.6	99.0	0.6	80-120	20		

To: **Clayton**

Attn: John Glover

Test Method: 7470A
6010B

Prep Method: 7470A
3010A

Batch QC Report

Soluble CAM 17 Metals

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/15-03.15**

LCS: 1999/12/15-03.15-040 Extracted: 12/15/1999 08:43 Analyzed: 12/16/1999 11:19

LCSD: 1999/12/15-03.15-041 Extracted: 12/15/1999 08:43 Analyzed: 12/16/1999 11:22

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Silver	0.507	0.504	0.500	0.500	101.4	100.8	0.6	80-120	20		

Total Extractable Petroleum Hydrocarbons (TEPH)

Clayton

Attn: John Glover

Project #: 70-00399.01

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Phone: (925) 426-2690 Fax: (925) 426-0106

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-2	Water	12/04/1999	1
B-3	Water	12/04/1999	2
B-4	Water	12/05/1999	3

To: **Clayton**
Attn.: John Glover

Test Method: 8015m
Prep Method: 3510/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-2**	Lab Sample ID:	**1999-12-0183-001**
Project:	70-00399.01	Received:	12/09/1999 16:25
		Extracted:	12/14/1999 09:00
Sampled:	12/04/1999	QC-Batch:	1999/12/14-04.10
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	200	50	ug/L	1.00	12/15/1999 21:32	ed
Motor Oil	ND	500	ug/L	1.00	12/15/1999 21:32	
Surrogate(s)						
o-Terphenyl	73.7	60-130	%	1.00	12/15/1999 21:32	

To: **Clayton**

Attn.: John Glover

Test Method: 8015m

Prep Method: 3510/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-3**	Lab Sample ID:	**1999-12-0183-002**
Project:	70-00399.01	Received:	12/09/1999 16:25
		Extracted:	12/14/1999 09:00
Sampled:	12/04/1999	QC-Batch:	1999/12/14-04.10
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	1000	50	ug/L	1.00	12/15/1999 22:16	ndp
Motor Oil	ND	500	ug/L	1.00	12/15/1999 22:16	
Surrogate(s)						
o-Terphenyl	91.2	60-130	%	1.00	12/15/1999 22:16	

To: **Clayton**
Attn.: John Glover

Test Method: 8015m
Prep Method: 3510/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-4**	Lab Sample ID:	**1999-12-0183-003**
Project:	70-00399.01	Received:	12/09/1999 16:25
		Extracted:	12/14/1999 09:00
Sampled:	12/05/1999	QC-Batch:	1999/12/14-04.10
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	180	50	ug/L	1.00	12/15/1999 23:00	ndp
Motor Oil	ND	500	ug/L	1.00	12/15/1999 23:00	
Surrogate(s)						
o-Terphenyl	85.3	60-130	%	1.00	12/15/1999 23:00	

To: **Clayton**
Attn.: John Glover

Test Method: 8015m
Prep Method: 3510/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Method Blank **Water** **QC Batch # 1999/12/14-04.10**

MB: 1999/12/14-04.10-001 Date Extracted: 12/14/1999 09:00

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	50	ug/L	12/15/1999 02:06	
Motor Oil	ND	500	ug/L	12/15/1999 02:06	
Surrogate(s)					
o-Terphenyl	91.0	60-130	%	12/15/1999 02:06	

To: **Clayton**
Attn: John Glover

Test Method: 8015m
Prep Method: 3510/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/14-04.10**

LCS: 1999/12/14-04.10-002 Extracted: 12/14/1999 09:00 Analyzed: 12/16/1999 15:03
LCSD: 1999/12/14-04.10-003 Extracted: 12/14/1999 09:00 Analyzed: 12/16/1999 15:49

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Diesel	912	760	1250	1250	73.0	60.8	18.2	60-130	25		
Surrogate(s)											
o-Terphenyl	20.0	18.5	20.0	20.0	100.0	92.5		60-130			

To: **Clayton**
Attn:John Glover

Test Method: 8015m
Prep Method: 3510/8015M

Legend & Notes

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte Flags

ed

Hydrocarbon reported is in the early Diesel range, and does not match our Diesel standard

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

99-12-01823

Clayton LABORATORY SERVICES

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: 5 DAY
Rush Charges Authorized? ☐ Yes ☐ No
☐ Phone or ☐ Fax Results

For Clayton Use Only
Clayton Lab Project No.

REPORT RESULTS TO
Name: JOHN GLOVER
Company: CLAYTON
Mailing Address: 6920 KOLL CENTER PKWY #216
City, State, Zip: PLEASANTON, CA 94566
Telephone No.: 925-426-2600 FAX No.: 925-426-0106
Client Job No.: 70-00379.01
Dept.:

SEND INVOICE TO
Purchase Order No.:
Name:
Company: Dept.:
Address:
City, State, Zip:

Special instructions and/or specific regulatory requirements:
(method, limit of detection, etc.)
EXTRA VOA FOR B-4 FOR 8260/TPHG ALREADY SUBMITED.

* Explanation of Preservative

Samples are: (check if applicable)
☐ Drinking Water
☑ Groundwater
☐ Wastewater

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request. Enter a 'P' if Preservative added.*)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	TPHD/MO	CAM-17	EDITER METALS	FOR LAB USE ONLY
B-2	12/3/99		W		2	X			
B-3	12/4/99		W		2	X			
B-4	12/5/99		W		4	X	X	X	

CHAIN OF CUSTODY
Collected by: MARK MULLANEY (print) Collector's Signature:
Relinquished by: Date/Time 12/8/99 1630
Relinquished by: Date/Time
Method of Shipment:

Received by: Date/Time
Received at Lab by: Denise Harrington Date/Time 12/9/99 @ 1625
Sample Condition Upon Receipt: ☐ Acceptable ☐ Other (explain)

Authorized by: Date
(Client Signature **MUST** Accompany Request)

Please return completed form and samples to one of the Clayton Group Services, Inc. labs listed below:

Detroit Regional Lab
22345 Roethel Drive
Novi, MI 48375
(800) 806-5687
(248) 344-1770
FAX (248) 344-2655

Atlanta Regional Lab
3380 Chastain Meadows Parkway, Suite 300
Kennesaw, GA 30144
(800) 252-9919
(770) 499-7500
FAX (770) 423-4990

Seattle Regional Lab
4636 E. Marginal Way S., Suite 215
Seattle, WA 98134
(800) 568-7755
(206) 763-7364
FAX (206) 763-4189

DISTRIBUTION:
White = Clayton Laboratory
Yellow = Clayton Accounting
Pink = Client Copy

9/97 20K

Clayton
6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Attn.: Mr. John Glover

Dear John

Attached is our report for your samples received on Monday December 13, 1999
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after January 12, 2000 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919

Sincerely,

Vincent Vancil

Halogenated Volatile Organics Compounds

Clayton

Attn: John Glover

Project #: 70-00399.01

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Phone: (925) 426-2690 Fax: (925) 426-0106

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-3 @ 1,3 COMP	Soil	12/01/1999	3
B-7 @ 2,4 COMP	Soil	12/01/1999	7
B-11 @ 2,4 COMP	Soil	12/01/1999	11
B-12 @ 2,4 COMP	Soil	12/01/1999	12
B-13 @ 2,4 COMP	Soil	12/01/1999	13
B-14 @ 2,4 COMP	Soil	12/01/1999	14

To: **Clayton**

Attn.: John Glover

Test Method: 8260A

Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	**B-3 @ 1,3 COMP**	Lab Sample ID:	**1999-12-0232-003**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 15:39
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.09
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	12/15/1999 15:39	
Vinyl chloride	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Chloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Methylene chloride	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Chloroform	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Trichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Chlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Bromoform	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Chloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Bromomethane	ND	5.0	ug/Kg	1.00	12/15/1999 15:39	
Surrogate(s)						
4-Bromofluorobenzene	111.4	74-121	%	1.00	12/15/1999 15:39	
1,2-Dichloroethane-d4	97.1	70-121	%	1.00	12/15/1999 15:39	
Toluene-d8	93.3	81-117	%	1.00	12/15/1999 15:39	

To: **Clayton**

Attn.: John Glover

Test Method: 8260A

Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	**B-7 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-007**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 16:18
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.09
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	12/15/1999 16:18	
Vinyl chloride	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Chloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Methylene chloride	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Chloroform	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Trichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Chlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Bromoform	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Chloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Bromomethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:18	
Surrogate(s)						
4-Bromofluorobenzene	116.4	74-121	%	1.00	12/15/1999 16:18	
1,2-Dichloroethane-d4	97.5	70-121	%	1.00	12/15/1999 16:18	
Toluene-d8	93.3	81-117	%	1.00	12/15/1999 16:18	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	**B-11 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-011**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 16:57
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.09
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	12/15/1999 16:57	
Vinyl chloride	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Chloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Methylene chloride	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Chloroform	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Trichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Chlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Bromoform	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Chloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Bromomethane	ND	5.0	ug/Kg	1.00	12/15/1999 16:57	
Surrogate(s)						
4-Bromofluorobenzene	111.2	74-121	%	1.00	12/15/1999 16:57	
1,2-Dichloroethane-d4	93.8	70-121	%	1.00	12/15/1999 16:57	
Toluene-d8	94.2	81-117	%	1.00	12/15/1999 16:57	

To: **Clayton**

Attn.: John Glover

Test Method: 8260A

Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	**B-12 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-012**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 17:35
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.09
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	12/15/1999 17:35	
Vinyl chloride	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Chloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Methylene chloride	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Chloroform	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Trichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Chlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Bromoform	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Chloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Bromomethane	ND	5.0	ug/Kg	1.00	12/15/1999 17:35	
Surrogate(s)						
4-Bromofluorobenzene	106.7	74-121	%	1.00	12/15/1999 17:35	
1,2-Dichloroethane-d4	90.8	70-121	%	1.00	12/15/1999 17:35	
Toluene-d8	96.2	81-117	%	1.00	12/15/1999 17:35	

To: **Clayton**

Attn.: John Glover

Test Method: 8260A

Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	**B-13 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-013**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 18:13
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.09
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	12/15/1999 18:13	
Vinyl chloride	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Chloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Methylene chloride	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Chloroform	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Trichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Chlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Bromoform	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Chloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Bromomethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:13	
Surrogate(s)						
4-Bromofluorobenzene	108.9	74-121	%	1.00	12/15/1999 18:13	
1,2-Dichloroethane-d4	111.1	70-121	%	1.00	12/15/1999 18:13	
Toluene-d8	96.7	81-117	%	1.00	12/15/1999 18:13	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	**B-14 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-014**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 18:52
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.09
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	12/15/1999 18:52	
Vinyl chloride	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Chloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Methylene chloride	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Chloroform	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Trichloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Chlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Bromoform	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Chloromethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Bromomethane	ND	5.0	ug/Kg	1.00	12/15/1999 18:52	
Surrogate(s)						
4-Bromofluorobenzene	104.5	74-121	%	1.00	12/15/1999 18:52	
1,2-Dichloroethane-d4	98.1	70-121	%	1.00	12/15/1999 18:52	
Toluene-d8	96.2	81-117	%	1.00	12/15/1999 18:52	

To: **Clayton**
Attn.: John Glover

Test Method: 8260A
Prep Method: 5030

Batch QC Report

Halogenated Volatile Organics Compounds

Method Blank | **Soil** | **QC Batch # 1999/12/15-01.09**

MB: 1999/12/15-01.09-001

Date Extracted: 12/15/1999 12:56

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Bromodichloromethane	ND	5.0	ug/Kg	12/15/1999 12:56	
Bromoform	ND	5.0	ug/Kg	12/15/1999 12:56	
Bromomethane	ND	10.0	ug/Kg	12/15/1999 12:56	
Carbon tetrachloride	ND	5.0	ug/Kg	12/15/1999 12:56	
Chlorobenzene	ND	5.0	ug/Kg	12/15/1999 12:56	
Chloroethane	ND	10	ug/Kg	12/15/1999 12:56	
2-Chloroethylvinyl ether	ND	50	ug/Kg	12/15/1999 12:56	
Chloroform	ND	5.0	ug/Kg	12/15/1999 12:56	
Chloromethane	ND	10	ug/Kg	12/15/1999 12:56	
Dibromochloromethane	ND	5.0	ug/Kg	12/15/1999 12:56	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	12/15/1999 12:56	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	12/15/1999 12:56	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	12/15/1999 12:56	
Dichlorodifluoromethane	ND	10	ug/Kg	12/15/1999 12:56	
1,1-Dichloroethane	ND	5.0	ug/Kg	12/15/1999 12:56	
1,2-Dichloroethane	ND	5.0	ug/Kg	12/15/1999 12:56	
1,1-Dichloroethene	ND	5.0	ug/Kg	12/15/1999 12:56	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	12/15/1999 12:56	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	12/15/1999 12:56	
1,2-Dichloropropane	ND	5.0	ug/Kg	12/15/1999 12:56	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	12/15/1999 12:56	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	12/15/1999 12:56	
Methylene chloride	ND	5.0	ug/Kg	12/15/1999 12:56	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	12/15/1999 12:56	
Tetrachloroethene	ND	5.0	ug/Kg	12/15/1999 12:56	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	12/15/1999 12:56	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	12/15/1999 12:56	
Trichloroethene	ND	5.0	ug/Kg	12/15/1999 12:56	
Vinyl chloride	ND	5.0	ug/Kg	12/15/1999 12:56	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	12/15/1999 12:56	
Trichlorofluoromethane	ND	5.0	ug/Kg	12/15/1999 12:56	
Surrogate(s)					
4-Bromofluorobenzene	106.0	74-121	%	12/15/1999 12:56	
1,2-Dichloroethane-d4	88.4	70-121	%	12/15/1999 12:56	
Toluene-d8	96.8	81-117	%	12/15/1999 12:56	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-12-0232

To: **Clayton**
Attn: John Glover

Test Method: 8260A
Prep Method: 5030

Batch QC Report

Halogenated Volatile Organics Compounds

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 1999/12/15-01.09**

LCS: 1999/12/15-01.09-002 Extracted: 12/15/1999 11:29 Analyzed: 12/15/1999 11:29
LCSD: 1999/12/15-01.09-003 Extracted: 12/15/1999 12:18 Analyzed: 12/15/1999 12:18

Compound	Conc. [ug/Kg]		Exp.Conc. [ug/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Chlorobenzene	111	110	100.0	100.0	111.0	110.0	0.9	61-121	20		
1,1-Dichloroethene	108	97.1	100.0	100.0	108.0	97.1	10.6	65-125	20		
Trichloroethene	94.4	90.0	100.0	100.0	94.4	90.0	4.8	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	545	529	500	500	109.0	105.8		74-121			
1,2-Dichloroethane-d4	478	437	500	500	95.6	87.4		70-121			
Toluene-d8	461	465	500	500	92.2	93.0		81-117			

Gas/BTEX and MTBE

Clayton

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Attn: John Glover

Phone: (925) 426-2690 Fax: (925) 426-0106

Project #: 70-00399.01

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-3 @ 1,3 COMP	Soil	12/01/1999	3
B-7 @ 2,4 COMP	Soil	12/01/1999	7
B-11 @ 2,4 COMP	Soil	12/01/1999	11
B-12 @ 2,4 COMP	Soil	12/01/1999	12
B-13 @ 2,4 COMP	Soil	12/01/1999	13
B-14 @ 2,4 COMP	Soil	12/01/1999	14

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**B-3 @ 1,3 COMP**	Lab Sample ID:	**1999-12-0232-003**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 12:29
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.04
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/15/1999 12:29	
Benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 12:29	
Toluene	ND	0.0050	mg/Kg	1.00	12/15/1999 12:29	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 12:29	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/15/1999 12:29	
MTBE	ND	0.0050	mg/Kg	1.00	12/15/1999 12:29	
Surrogate(s)						
Trifluorotoluene	41.5	53-125	%	1.00	12/15/1999 12:29	sl
Trifluorotoluene-FID	53.8	53-125	%	1.00	12/15/1999 12:29	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**B-7 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-007**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 12:57
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.04
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/15/1999 12:57	
Benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 12:57	
Toluene	ND	0.0050	mg/Kg	1.00	12/15/1999 12:57	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 12:57	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/15/1999 12:57	
MTBE	ND	0.0050	mg/Kg	1.00	12/15/1999 12:57	
Surrogate(s)						
Trifluorotoluene	50.2	53-125	%	1.00	12/15/1999 12:57	sl
Trifluorotoluene-FID	60.2	53-125	%	1.00	12/15/1999 12:57	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**B-11 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-011**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 13:25
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.04
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/15/1999 13:25	
Benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 13:25	
Toluene	ND	0.0050	mg/Kg	1.00	12/15/1999 13:25	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 13:25	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/15/1999 13:25	
MTBE	ND	0.0050	mg/Kg	1.00	12/15/1999 13:25	
Surrogate(s)						
Trifluorotoluene	70.1	53-125	%	1.00	12/15/1999 13:25	
Trifluorotoluene-FID	67.3	53-125	%	1.00	12/15/1999 13:25	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**B-12 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-012**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 13:54
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.04
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/15/1999 13:54	
Benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 13:54	
Toluene	0.012	0.0050	mg/Kg	1.00	12/15/1999 13:54	
Ethyl benzene	0.034	0.0050	mg/Kg	1.00	12/15/1999 13:54	
Xylene(s)	0.11	0.0050	mg/Kg	1.00	12/15/1999 13:54	
MTBE	ND	0.0050	mg/Kg	1.00	12/15/1999 13:54	
Surrogate(s)						
Trifluorotoluene	63.4	53-125	%	1.00	12/15/1999 13:54	
Trifluorotoluene-FID	67.8	53-125	%	1.00	12/15/1999 13:54	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**B-13 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-013**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 14:21
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.04
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/15/1999 14:21	
Benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 14:21	
Toluene	ND	0.0050	mg/Kg	1.00	12/15/1999 14:21	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 14:21	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/15/1999 14:21	
MTBE	ND	0.0050	mg/Kg	1.00	12/15/1999 14:21	
Surrogate(s)						
Trifluorotoluene	44.2	53-125	%	1.00	12/15/1999 14:21	sl
Trifluorotoluene-FID	54.1	53-125	%	1.00	12/15/1999 14:21	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**B-14 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-014**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 14:49
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.04
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/15/1999 14:49	
Benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 14:49	
Toluene	ND	0.0050	mg/Kg	1.00	12/15/1999 14:49	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/15/1999 14:49	
Xylene(s)	ND	0.0050	mg/Kg	1.00	12/15/1999 14:49	
MTBE	ND	0.0050	mg/Kg	1.00	12/15/1999 14:49	
Surrogate(s)						
Trifluorotoluene	58.1	53-125	%	1.00	12/15/1999 14:49	
Trifluorotoluene-FID	65.1	53-125	%	1.00	12/15/1999 14:49	

To: **Clayton**

Attn.: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report
Gas/BTEX and MTBE

Method Blank | **Soil** | **QC Batch # 1999/12/15-01.04**

MB: 1999/12/15-01.04-001

Date Extracted: 12/15/1999 05:19

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	12/15/1999 05:19	
Benzene	ND	0.5	ug/L	12/15/1999 05:19	
Toluene	ND	0.5	ug/L	12/15/1999 05:19	
Ethyl benzene	ND	0.5	ug/L	12/15/1999 05:19	
Xylene(s)	ND	0.5	ug/L	12/15/1999 05:19	
MTBE	ND	5.0	ug/L	12/15/1999 05:19	
Surrogate(s)					
Trifluorotoluene	81.8	58-124	%	12/15/1999 05:19	
4-Bromofluorobenzene-FID	78.6	50-150	%	12/15/1999 05:19	

To: **Clayton**

Attn: John Glover

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 1999/12/15-01.04**

LCS: 1999/12/15-01.04-002 Extracted: 12/15/1999 05:47 Analyzed: 12/15/1999 05:47

LCSD: 1999/12/15-01.04-003 Extracted: 12/15/1999 06:15 Analyzed: 12/15/1999 06:15

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	0.493	0.499	0.500	0.500	98.6	99.8	1.2	75-125	35		
Benzene	0.0971	0.0845	0.1000	0.1000	97.1	84.5	13.9	77-123	35		
Toluene	0.0972	0.0841	0.1000	0.1000	97.2	84.1	14.5	78-122	35		
Ethyl benzene	0.0977	0.0847	0.1000	0.1000	97.7	84.7	14.3	70-130	35		
Xylene(s)	0.291	0.255	0.300	0.300	97.0	85.0	13.2	75-125	35		
Surrogate(s)											
Trifluorotoluene	407	347	500	500	81.4	69.4		53-125			
4-Bromofluorobenzene-FI	401	390	500	500	80.2	78.0		58-124			

To: **Clayton**

Attn:John Glover

Test Method: 8015M
8020

Prep Method: 5030

Legend & Notes

Gas/BTEX and MTBE

Analyte Flags

sl

Surrogate recoveries were lower than QC limit due to matrix interference, confirmed by reanalysis.

Metals

Clayton

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Attn: John Glover

Phone: (925) 426-2690 Fax: (925) 426-0106

Project #: 70-00399.01

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-3 @ 1,3 COMP	Soil	12/01/1999	3
B-7 @ 2,4 COMP	Soil	12/01/1999	7
B-11 @ 2,4 COMP	Soil	12/01/1999	11
B-12 @ 2,4 COMP	Soil	12/01/1999	12
B-13 @ 2,4 COMP	Soil	12/01/1999	13
B-14 @ 2,4 COMP	Soil	12/01/1999	14

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3050B

Metals

Sample ID:	**B-3 @ 1,3 COMP**	Lab Sample ID:	**1999-12-0232-003**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/14/1999 12:51
Sampled:	12/01/1999	QC-Batch:	1999/12/14-04.15
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.50	mg/Kg	1.00	12/14/1999 20:24	
Chromium	68	1.0	mg/Kg	1.00	12/14/1999 20:24	
Lead	8.0	1.0	mg/Kg	1.00	12/14/1999 20:24	
Nickel	120	1.0	mg/Kg	1.00	12/14/1999 20:24	
Zinc	56	1.0	mg/Kg	1.00	12/14/1999 20:24	

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3050B

Metals

Sample ID:	**B-7 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-007**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/14/1999 12:51
Sampled:	12/01/1999	QC-Batch:	1999/12/14-04.15
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.50	mg/Kg	1.00	12/14/1999 20:36	
Chromium	61	1.0	mg/Kg	1.00	12/14/1999 20:36	
Lead	6.3	1.0	mg/Kg	1.00	12/14/1999 20:36	
Nickel	140	1.0	mg/Kg	1.00	12/14/1999 20:36	
Zinc	57	1.0	mg/Kg	1.00	12/14/1999 20:36	

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3050B

Metals

Sample ID:	**B-11 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-011**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 08:18
Sampled:	12/01/1999	QC-Batch:	1999/12/15-02.15
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.50	mg/Kg	1.00	12/15/1999 21:03	
Chromium	40	1.0	mg/Kg	1.00	12/15/1999 21:03	
Lead	9.0	1.0	mg/Kg	1.00	12/15/1999 21:03	
Nickel	82	1.0	mg/Kg	1.00	12/15/1999 21:03	
Zinc	52	1.0	mg/Kg	1.00	12/15/1999 21:03	

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3050B

Metals

Sample ID:	**B-12 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-012**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 08:18
Sampled:	12/01/1999	QC-Batch:	1999/12/15-02.15
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.50	mg/Kg	1.00	12/15/1999 21:06	
Chromium	45	1.0	mg/Kg	1.00	12/15/1999 21:06	
Lead	6.6	1.0	mg/Kg	1.00	12/15/1999 21:06	
Nickel	93	1.0	mg/Kg	1.00	12/15/1999 21:06	
Zinc	47	1.0	mg/Kg	1.00	12/15/1999 21:06	

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3050B

Metals

Sample ID:	**B-13 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-013**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/14/1999 12:51
Sampled:	12/01/1999	QC-Batch:	1999/12/14-04.15
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.50	mg/Kg	1.00	12/14/1999 21:00	
Chromium	72	1.0	mg/Kg	1.00	12/14/1999 21:00	
Lead	10	1.0	mg/Kg	1.00	12/14/1999 21:00	
Nickel	160	1.0	mg/Kg	1.00	12/14/1999 21:00	
Zinc	64	1.0	mg/Kg	1.00	12/14/1999 21:00	

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3050B

Metals

Sample ID:	**B-14 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-014**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 08:18
Sampled:	12/01/1999	QC-Batch:	1999/12/15-02.15
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Cadmium	ND	0.50	mg/Kg	1.00	12/15/1999 21:09	
Chromium	34	1.0	mg/Kg	1.00	12/15/1999 21:09	
Lead	9.7	1.0	mg/Kg	1.00	12/15/1999 21:09	
Nickel	22	1.0	mg/Kg	1.00	12/15/1999 21:09	
Zinc	48	1.0	mg/Kg	1.00	12/15/1999 21:09	

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3050B

Batch QC Report
Metals

Method Blank | **Soil** | **QC Batch # 1999/12/15-02.15**

MB: 1999/12/15-02.15-104 | Date Extracted: 12/15/1999 08:18

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Cadmium	ND	0.50	mg/Kg	12/15/1999 20:45	
Chromium	ND	1.0	mg/Kg	12/15/1999 20:45	
Lead	ND	1.0	mg/Kg	12/15/1999 20:45	
Nickel	ND	1.0	mg/Kg	12/15/1999 20:45	
Zinc	ND	1.0	mg/Kg	12/15/1999 20:45	

To: **Clayton**
Attn.: John Glover

Test Method: 6010B
Prep Method: 3050B

Batch QC Report
Metals

Method Blank | **Soil** | **QC Batch # 1999/12/14-04.15**

MB: 1999/12/14-04.15-024 | Date Extracted: 12/14/1999 12:51

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Cadmium	ND	0.50	mg/Kg	12/14/1999 19:27	
Chromium	ND	1.0	mg/Kg	12/14/1999 19:27	
Lead	ND	1.0	mg/Kg	12/14/1999 19:27	
Nickel	ND	1.0	mg/Kg	12/14/1999 19:27	
Zinc	ND	1.0	mg/Kg	12/14/1999 19:27	

To: **Clayton**

Attn: John Glover

Test Method: 6010B

Prep Method: 3050B

Batch QC Report

Metals

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 1999/12/15-02.15**

LCS: 1999/12/15-02.15-107 Extracted: 12/15/1999 08:18 Analyzed: 12/15/1999 20:56

LCSD: 1999/12/15-02.15-108 Extracted: 12/15/1999 08:18 Analyzed: 12/15/1999 20:59

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Cadmium	93.4	93.2	100.0	100.0	93.4	93.2	0.2	80-120	20		
Chromium	95.1	95.3	100.0	100.0	95.1	95.3	0.2	80-120	20		
Lead	93.1	95.6	100.0	100.0	93.1	95.6	2.6	80-120	20		
Nickel	94.1	93.9	100.0	100.0	94.1	93.9	0.2	80-120	20		
Zinc	94.3	94.0	100.0	100.0	94.3	94.0	0.3	80-120	20		

To: **Clayton**

Attn: John Glover

Test Method: 6010B

Prep Method: 3050B

Batch QC Report

Metals

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 1999/12/14-04.15**

LCS: 1999/12/14-04.15-025 Extracted: 12/14/1999 12:51 Analyzed: 12/14/1999 19:31

LCSD: 1999/12/14-04.15-026 Extracted: 12/14/1999 12:51 Analyzed: 12/14/1999 19:36

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Cadmium	103	101	100.0	100.0	103.0	101.0	2.0	80-120	20		
Chromium	109	103	100.0	100.0	109.0	103.0	5.7	80-120	20		
Lead	104	102	100.0	100.0	104.0	102.0	1.9	80-120	20		
Nickel	104	102	100.0	100.0	104.0	102.0	1.9	80-120	20		
Zinc	104	101	100.0	100.0	104.0	101.0	2.9	80-120	20		

Total Extractable Petroleum Hydrocarbons (TEPH)

Clayton

6920 Koll Center Parkway
Pleasanton, CA 94566-4756

Attn: John Glover

Phone: (925) 426-2690 Fax: (925) 426-0106

Project #: 70-00399.01

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-3 @ 1,3 COMP	Soil	12/01/1999	3
B-7 @ 2,4 COMP	Soil	12/01/1999	7
B-11 @ 2,4 COMP	Soil	12/01/1999	11
B-12 @ 2,4 COMP	Soil	12/01/1999	12
B-13 @ 2,4 COMP	Soil	12/01/1999	13
B-14 @ 2,4 COMP	Soil	12/01/1999	14

To: **Clayton**
Attn.: John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-3 @ 1,3 COMP**	Lab Sample ID:	**1999-12-0232-003**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/14/1999 16:08
Sampled:	12/01/1999	QC-Batch:	1999/12/14-01.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	6.2	1.0	mg/Kg	1.00	12/16/1999 00:27	nhc
Motor Oil	ND	50	mg/Kg	1.00	12/16/1999 00:27	
Surrogate(s)						
o-Terphenyl	80.3	60-130	%	1.00	12/16/1999 00:27	

To: **Clayton**
Attn.: John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-7 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-007**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/14/1999 16:15
Sampled:	12/01/1999	QC-Batch:	1999/12/14-01.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	1.7	1.0	mg/Kg	1.00	12/16/1999 03:21	nhc
Motor Oil	ND	50	mg/Kg	1.00	12/16/1999 03:21	
Surrogate(s)						
o-Terphenyl	78.8	60-130	%	1.00	12/16/1999 03:21	

To: **Clayton**
Attn.: John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-11 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-011**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 16:15
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	3.1	1.0	mg/Kg	1.00	12/17/1999 00:13	nhc
Motor Oil	ND	50	mg/Kg	1.00	12/17/1999 00:13	
Surrogate(s)						
o-Terphenyl	81.3	60-130	%	1.00	12/17/1999 00:13	

To: **Clayton**
Attn.: John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-12 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-012**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/15/1999 16:15
Sampled:	12/01/1999	QC-Batch:	1999/12/15-01.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	2.9	1.0	mg/Kg	1.00	12/17/1999 00:49	nhc
Motor Oil	ND	50	mg/Kg	1.00	12/17/1999 00:49	
Surrogate(s)						
o-Terphenyl	86.5	60-130	%	1.00	12/17/1999 00:49	

To: **Clayton**
Attn.: John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-13 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-013**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/14/1999 16:15
Sampled:	12/01/1999	QC-Batch:	1999/12/14-01.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	2.8	1.0	mg/Kg	1.00	12/16/1999 07:44	nhc
Motor Oil	ND	50	mg/Kg	1.00	12/16/1999 07:44	
Surrogate(s)						
o-Terphenyl	71.3	60-130	%	1.00	12/16/1999 07:44	

To: **Clayton**
Attn.: John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID:	**B-14 @ 2,4 COMP**	Lab Sample ID:	**1999-12-0232-014**
Project:	70-00399.01	Received:	12/13/1999 16:25
		Extracted:	12/14/1999 16:15
Sampled:	12/01/1999	QC-Batch:	1999/12/14-01.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	1.5	1.0	mg/Kg	1.00	12/16/1999 08:28	ndp
Motor Oil	ND	50	mg/Kg	1.00	12/16/1999 08:28	
Surrogate(s)						
o-Terphenyl	73.9	60-130	%	1.00	12/16/1999 08:28	

To: **Clayton**
Attn.: John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Method Blank **Soil** **QC Batch # 1999/12/14-01.10**

MB: 1999/12/14-01.10-001 Date Extracted: 12/14/1999 09:00

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	1	mg/Kg	12/14/1999 20:05	
Motor Oil	ND	50	mg/Kg	12/14/1999 20:05	
Surrogate(s)					
o-Terphenyl	77.0	60-130	%	12/14/1999 20:05	

To: **Clayton** Test Method: 8015M

Attn.: John Glover Prep Method: 3550/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Method Blank **Soil** **QC Batch # 1999/12/15-01.10**

MB: 1999/12/15-01.10-001 Date Extracted: 12/15/1999 09:00

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	1	mg/Kg	12/15/1999 14:23	
Motor Oil	ND	50	mg/Kg	12/15/1999 14:23	
Surrogate(s)					
o-Terphenyl	90.0	60-130	%	12/15/1999 14:23	

To: **Clayton**
Attn: John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 1999/12/14-01.10**

LCS: 1999/12/14-01.10-002 Extracted: 12/14/1999 09:00 Analyzed: 12/14/1999 20:49
LCSD: 1999/12/14-01.10-003 Extracted: 12/14/1999 09:00 Analyzed: 12/14/1999 21:33

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Diesel	30.9	31.2	41.7	41.7	74.1	74.8	0.9	60-130	25		
Surrogate(s)											
o-Terphenyl	24.0	25.9	20.0	20.0	120.0	129.5		60-130			

To: **Clayton**
Attn: John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 1999/12/15-01.10**

LCS: 1999/12/15-01.10-002 Extracted: 12/15/1999 09:00 Analyzed: 12/16/1999 14:09
LCSD: 1999/12/15-01.10-003 Extracted: 12/15/1999 09:00 Analyzed: 12/16/1999 14:09

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Diesel	35.8	34.3	41.7	41.7	85.9	82.3	4.3	60-130	25		
Surrogate(s)											
o-Terphenyl	22.2	21.2	20.0	20.0	111.0	106.0		60-130			

To: **Clayton**
Attn:John Glover

Test Method: 8015M
Prep Method: 3550/8015M

Legend & Notes

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte Flags

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

nhc

Compounds reported are in this range but they do not exhibit a pattern characteristic of petroleum hydrocarbon.

CHROMALAB, INC.
Environmental Service (SDB)

Sample Receipt Checklist

Client Name: Clayton Date/Time Received: 12/13/99 16:25 (Date / Time)

Reference/Subm #: 99120232 Received by: Bernie Harrington

Checklist completed by: Arise/dn 12/14/99 (Signature / Date) Reviewed By: _____ (Initial/Date)

Matrix: Soil Carrier name: Client - C/L - _____

Shipping container/cooler in good condition?	Yes___	No___	Not Present___
Custody seals intact on shipping container/cooler?	Yes___	No___	Not Present___
Custody seals intact on sample bottles?	Yes___	No___	Not Present___
Chain of custody present?	Yes✓	No___	
Chain of custody signed when relinquished and received?	Yes✓	No___	
Chain of custody agrees with sample labels?	Yes___	No___	
Samples in proper container/bottle?	Yes✓	No___	
Sample containers intact?	Yes___	No___	
Sufficient sample volume for indicated test?	Yes___	No___	
All samples received within holding time?	Yes___	No___	
Container/Temp Blank temperature in compliance?	Temp:___°C Yes___	No___	
Water - VOA vials have zero headspace?	No VOA vials submitted___ Yes___	No___	

Water - pH acceptable upon receipt?____adjusted?____Checked by_____/chemist for VOAs

Any No and/or NA (not applicable) response must be detailed in the comments section below.

==========

Client contacted: _____ Date contacted: 12/14/99 Person contacted: John Glover

Contacted by: DSH Regarding: see below

Comments: SAMPLE missing - B-1@5; B9@4; B10@6; B11@2 and B12@2

Corrective Action: Samples B-11@2 and B-12@2 rec'd 12/14/99 - DSH

c:\qa\forms\smprechk.doc

01/24/97

49521

Clayton LABORATORY SERVICES

99-12-0232

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: 5-Day
Rush Charges Authorized? ☐ Yes ☑ No
☐ Phone or ☑ Fax Results

For Clayton Use Only
Clayton Lab Project No.

REPORT RESULTS TO
Name: John Glover
Company: Clayton Environmental
Mailing Address: 6920 Koll Center Parkway Suite 216
City, State, Zip: Pleasanton, CA 94566
Telephone No.: 925-426-2690 FAX No.: 925-426-1057
Client Job No.: 70-00399.01
Dept.: ERMR

SEND INVOICE TO
Purchase Order No.
Name
Company
Dept.
Address
City, State, Zip

Special instructions and/or specific regulatory requirements:
(method, limit of detection, etc.)
* composite each line (2 point composite)

* Explanation of Preservative

Samples are:
(check if applicable)
☐ Drinking Water
☐ Groundwater
☐ Wastewater

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units) (container)	Number of Containers	8015m	LUFT-5	8010 VOC + MTBE	HOLD pending client input	FOR LAB USE ONLY
B-1@1, B-1@5	12/1/99	All Day	Soil	sleeve	2	X	X	X	X	B-1@5 not rec'd - DSH
B-2@3, B-2@5	↓	↓	↓	↓	↓	↓	↓	↓	X	
B-3@1, B-3@3										
B-4@2, B-4@4									X	
B-5@2, B-5@4									X	
B-6@2, B-6@4									X	
B-7@2, B-7@4										
B-8@2, B-8@4									X	
B-9@4 B-9@2									X	B9@4 not rec'd - DSH
B-10@4, B-10@6	↓	↓	↓	↓	↓	↓	↓	↓	X	B-10@6 not rec'd - DSH

CHAIN OF CUSTODY
Collected by: Jesse Edmonds (print)
Collector's Signature:
Relinquished by: Date/Time 12-13-99
Relinquished by: Date/Time 12/13/99 1625
Method of Shipment:
Received by: Date/Time 12-13-99 1550
Received by: Date/Time
Received at Lab by: Denise Harrington Date/Time 12/13/99@1625
Sample Condition Upon Receipt: ☐ Acceptable ☐ Other (explain)

Authorized by: _____ Date _____
(Client Signature MUST Accompany Request)

Please return completed form and samples to one of the Clayton Group Services, Inc. labs listed below:

Detroit Regional Lab
22345 Roethel Drive
Novi, MI 48375
(800) 806-5687
(248) 344-1770
FAX (248) 344-2655

Atlanta Regional Lab
3380 Chastain Meadows Parkway, Suite 300
Kennesaw, GA 30144
(800) 252-9919
(770) 499-7500
FAX (770) 423-4990

Seattle Regional Lab
4636 E. Marginal Way S., Suite 215
Seattle, WA 98134
(800) 568-7755
(206) 763-7364
FAX (206) 763-4189

DISTRIBUTION:
White = Clayton Laboratory
Yellow = Clayton Accounting
Pink = Client Copy

Clayton LABORATORY SERVICES

99-12-0232

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: 5-Day
Rush Charges Authorized? ☐ Yes ☑ No
☐ Phone or ☑ Fax Results

For Clayton Use Only
Clayton Lab Project No.

REPORT RESULTS TO
Name: John Glover
Company: Clayton Environmental
Client Job No.: 70-00399.01
Dept.:
Mailing Address: 6920 Koll Center Parkway Suite 216
City, State, Zip: Pleasanton, CA 94566
Telephone No.: 925-426-2690 FAX No.: 925-426-2057

SEND INVOICE TO
Purchase Order No.:
Name:
Company: Dept.:
Address:
City, State, Zip:

Special instructions and/or specific regulatory requirements: (method, limit of detection, etc.)
* Composite each line

Samples are: (check if applicable)
☐ Drinking Water
☐ Groundwater
☐ Wastewater

* Explanation of Preservative

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request. Enter a 'P' if Preservative added.)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units) Laytahes	Number of Containers	8015m	Luft-5	8010 VOC + MTBE	FOR LAB USE ONLY
B-11@2, B-11@4	12-1-99	All Day	Soil	Acetate sleeve	2	X	X	X	B-11@2 rec'd 12/14 - DSH
B-12@2, B-12@4	↓	↓	↓	↓	2	↓	↓	↓	B-12@2 rec'd 12/14 - DSH
B-13@2, B-13@4					2				
B-14@2, B-14@4	✓	✓	✓	✓	2	✓	✓	✓	

CHAIN OF CUSTODY
Collected by: Jesse Edmonds (print) — Collector's Signature:
Relinquished by: — Date/Time 12-13-99 1550
Relinquished by: — Date/Time 12.13.99 1625 — Received by: — Date/Time 12.13.99
Method of Shipment: — Received at Lab by: Denise Harrington — Date/Time 12/13/99 @1625
Authorized by: (Client Signature MUST Accompany Request) Date
Sample Condition Upon Receipt: ☐ Acceptable ☐ Other (explain)

Please return completed form and samples to one of the Clayton Group Services, Inc. labs listed below:

Detroit Regional Lab
22345 Roethel Drive
Novi, MI 48375
(800) 806-5887
(248) 344-1770
FAX (248) 344-2655

Atlanta Regional Lab
3380 Chastain Meadows Parkway, Suite 300
Kennesaw, GA 30144
(800) 252-9919
(770) 499-7500
FAX (770) 423-4990

Seattle Regional Lab
4636 E. Marginal Way S., Suite 215
Seattle, WA 98134
(800) 568-7755
(206) 763-7364
FAX (206) 763-4189

DISTRIBUTION:
White = Clayton Laboratory
Yellow = Clayton Accounting
Pink = Client Copy

9/97 20K