

DEPARTMENT OF TRANSPORTATION

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JUL 13 2001

July 11, 2001

Mr. Don Hwang, Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Dear Mr. Hwang:

Enclosed please find the monitoring well installation and groundwater study report for the former Thomas Short Company site (3430 Wood Street, Alameda County site #386) in Oakland. Because of delays in getting the quarterly reports finalized by our consultant, it was ultimately decided to incorporate the first three groundwater sampling events into this one report. The well installation and initial sampling occurred in May 2000; since then the wells have been sampled in November 2000 and March 2001.

Previously, your contact within our office for this site had been Teresa Trinh; however, Ms. Trinh is no longer employed with our office. The Thomas Short Company site-related work is now being managed by myself. It is expected that as the water monitoring continues in the future, it will include my involvement. With the new State fiscal year having started this month, I anticipate preparing in the near future the contract needed to continue the monitoring work at the former Thomas Short Company site.

In the meantime, if you have any questions or comments regarding the first three sampling events, I can be reached at (510) 286-5647.

Sincerely,

HARRY Y. YAHATA
District Director

By: *Christopher R. Wilson*
CHRISTOPHER R. WILSON, P.E.
Office of Environmental Engineering

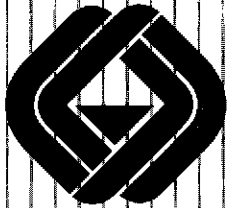
Enclosure

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JUL 13 2001

**MONITORING WELL INSTALLATION AND
GROUNDWATER SAMPLING REPORT**

**FORMER THOMAS A. SHORT Co.
OAKLAND, ALAMEDA COUNTY,
CALIFORNIA**



GEOCON

**GEOTECHNICAL
&
ENVIRONMENTAL
CONSULTANTS**

PREPARED FOR

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 4**

OAKLAND, CALIFORNIA

TASK ORDER NO. 04-190270-RM

GEOCON PROJECT NO. S8225-06-103

JUNE 2001

GEOCON

CONSULTANTS, INC.

ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS



Project No. S8225-06-103
June 29, 2001

Mr. Chris Wilson
California Department of Transportation
District 4
111 Grand Avenue, 14th Floor
Post Office Box 23660
Oakland, California 94623-0660

Subject: MONITORING WELL INSTALLATION AND GROUNDWATER SAMPLING REPORT
FORMER THOMAS A. SHORT COMPANY
OAKLAND, ALAMEDA COUNTY, CALIFORNIA
CONTRACT NO. 43A0012, TASK ORDER NO. 04-190270-RM

Dear Mr. Wilson:

In accordance with California Department of Transportation (Caltrans) Contract No. 43A0012 and Task Order No. 04-190270-RM, Geocon Consultants, Inc. has performed environmental engineering services at the project site. The site consists of the Former Thomas A. Short Company located at 3430 Wood Street in Oakland, California. The accompanying report summarizes the services performed including the installation of three groundwater monitoring wells and the results of the first groundwater sampling event.

The contents of this report reflect the views of Geocon Consultants, Inc., who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

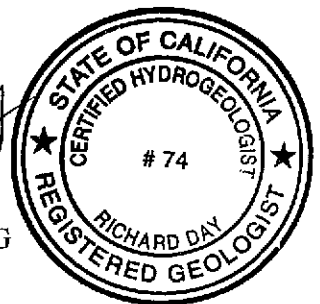
If there are any questions concerning the contents of this report, or if Geocon may be of further service, please contact the undersigned at your convenience.

Sincerely,

GEOCON CONSULTANTS, INC.

Matthew Hanko
Sr. Project Scientist

Richard Day CEG, CHG
Regional Manager



MWH:RWD:mwh

(5) Addressee

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SITE INVESTIGATION REPORT

1.0 INTRODUCTION

This report for the former Thomas A. Short Company (TASCO) site was prepared under California Department of Transportation (Caltrans) Contract No. 43A0012 and Task Order (TO) No. 04-190270-RM.

1.1 Site Description

The subject site is located at 3430 Wood Street in Oakland, Alameda County, California. No existing improvements at the site are present with the exception of two footings for the Interstate 880 (I 880) overpass. The approximate location of the site is depicted on the attached Vicinity Map presented as Figure 1. The approximate site boundaries and existing improvements are depicted on the Site Plan presented as Figure 2.

1.2 Background

It is understood that the former TASCO facility manufactured and repaired marine valves and associated parts for approximately 36 years. Caltrans purchased the property in 1994 and subsequently demolished the building improvements as part of the I-880 realignment project. One 4,000-gallon gasoline underground storage tank (UST) and one 1,000-gallon diesel UST were previously located at the TASCO facility. The approximate former UST locations are depicted on the Site Plan, Figure 2.

In June 1992, four borings (B1, B2, H1 and W1) were performed around the perimeter of the USTs (see Figure 2). W1 was completed as a 2-inch diameter groundwater monitoring well. The depth to groundwater in well W1 was measured at 3.9 meters (12.7 feet) below the ground surface (bgs) on July 1, 1992. Soil samples obtained from the borings contained elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd), and benzene, toluene, ethyl benzene and total xylenes (BTEX). Groundwater samples collected from H1 (hydropunch sample) and W1 contained TPHg concentrations of 16 and 1.3 milligrams per liter (mg/l), respectively.

The onsite USTs were removed from the TASCO facility in January 1993. Approximately 175 cubic yards of petroleum hydrocarbon-impacted soil was over excavated after the USTs were removed. Groundwater was encountered at a depth of approximately 3.1 meters (10 feet) bgs within the UST excavation. The results of confirmation soil samples indicated residual concentrations of petroleum hydrocarbons and lead. Subsequent to the UST removal activities, groundwater samples obtained from well W1 in February and October 1993 contained TPHg concentrations of 4.6 and 3.7 mg/l, respectively.

In November 1996, Geocon installed three groundwater monitoring wells (MW1 through MW3) around the former UST excavation (see Figure 2). The 2-inch diameter wells were installed to depths ranging from 3.5 to 4.0 meters (11.5 to 13 feet) bgs. Soil samples obtained from the well borings were analyzed for volatile organic compounds (VOCs), TPHg, TPHd, total recoverable petroleum hydrocarbons (TRPH) and 17 title 22 metals.

VOCs including methylene chloride (typical laboratory extractant) and carbon disulfide were detected at relatively low concentrations of less than 50 µg/kg in the soil samples analyzed. Sample MW3-10 contained benzene, toluene and total xylene concentrations of 314, 1,220 and 1,180 micrograms per kilogram (µg/kg), respectively. TPHg was detected in soil samples MW2-5 and MW3-10 at concentrations of 6.0 and 43 mg/kg, respectively. TPHd and TRPH were detected in the majority of the soil samples at concentrations ranging from 1.4 to 1,500 mg/kg. With the exception of 542 mg/kg lead reported for sample MW2-5, elevated metal concentrations were not reported.

Since wells MW1, MW2 and MW3 were installed, they have not been sampled or surveyed. Additionally, since the construction of bridge piers at the TASC0 site for the I-880 realignment structure, the onsite wells have not been able to be located with the exception of well W1.

1.3 Purpose

The purpose of the subject TO is to provide additional information regarding the extent of soil and groundwater impacts near the former fuel UST excavation at the TASC0 site, and to evaluate the site for potential low risk regulatory closure status.

2.0 SCOPE OF SERVICES

The following scope of services was performed as requested by Caltrans in TO No. 04-190270-RM.

2.1 Pre-Field Activities

- Conducted a pre-work site meeting on April 20, 2000. The pre-work meeting was attended by the Caltrans previous contract manager, Teresa Trinh, and Geocon's field representative, John Juhrend, to locate and inspect the work areas. At the pre-work site meeting the assumed locations of the previously installed wells were investigated by digging with a shovel and using a metal detector. The wells could not be located; thus, it was decided at the meeting to enhance the search with the aid of a backhoe. Subsequent to the backhoe operations, the TASC0 property was marked for Underground Service Alert utility clearance.
- Prepared a Site Investigation Workplan and a Health and Safety Plan, both dated May 5, 2000. The Workplan outlined and summarized the scope of work requested in the subject TO. The Health and Safety Plan provided guidelines on the use of personal protective equipment and the health and safety procedures implemented during the field activities.
- Obtained a drilling permit from Alameda County Public Works Agency, Water Resources Section.
- Contacted the local public utilities via Underground Service Alert, to attempt to delineate subsurface public utilities and conduits in proximity to the proposed excavation and boring/well locations.
- Retained the services of: 1) Cruz Brothers, a private utility locating subcontractor, to mark the location of underground utilities or obstructions in the vicinity of the proposed boring; 2) V&W Drilling, a California-licensed driller, to operate the drill rig; 3) Advanced Technology Laboratories (ATL), a California-certified hazardous materials testing laboratory (ELAP No. 1838), to perform laboratory analyses, and 4) Virgil Chavez Land Surveying to survey the top of groundwater monitoring well casing elevation and horizontal location.

2.2 Field Activities

On May 19, 2000, attempts to locate wells MW-1, MW-2, MW-3 and W1 were made using a backhoe. The assumed well locations were plotted in the field based on measurements extrapolated from the existing groundwater monitoring well location map. The backhoe was used to scrape the soil surface in an attempt to uncover the apparently buried or damage wells. The backhoe uncovered approximately 19 square meters (200 square feet) of area to 0.6 meter (two feet) below grade per well location, and only one well (W-1) was located. Well W-1 was not in good condition. The well did not have a well box and the casing was open only to approximately one meter (three feet) below grade. The approximate location of monitoring well W-1 is depicted on the Site Plan presented as Figure 2.

On May 23, 2000, three additional groundwater monitoring wells (MW-4, MW-5 and MW-6) were constructed on the TASC0 property. Each well was completed to 4.6 meters (15 feet) below grade and constructed with 3.1 meters (10 feet) of 0.025-cm (0.010-inch) slot screen, 5-cm (2-inch) diameter

schedule 40 polyvinyl chloride (PVC) casing and completed to approximately 0.76 meter (2.5 feet) above grade with 5-cm (2-inch) schedule 40 blank. A stand pipe monument was placed over each well head. The well construction details are presented in the boring logs included as Appendix A. Soil samples were collected from each well borehole and submitted to the laboratory to be analyzed for the presence of TPHg, TPHd, (BTEX), Volatile Organic Compounds (VOCs) and total lead.

Upon completion of the groundwater monitoring wells, each was developed and surveyed for top of casing elevation and horizontal location. A total of three groundwater sampling events with laboratory analysis have been performed.

3.0 INVESTIGATIVE METHODS

3.1 Boring Location Rationale

The locations of the monitoring wells were designated by Caltrans in the vicinity of the former USTs.

3.2 Procedures for Boring Advancement and Monitoring Well Construction

The borings were advanced using a truck-mounted hollow-stem auger drill rig on May 23, 2000. For logging purposes, soil samples were collected at 1.7-meter (five-foot) intervals. The soil samples were collected utilizing a split-spoon sampler lined with stainless-steel sleeves. The sampler was advanced approximately 0.46 meter (18 inches) into the underlying soil by dropping a 140-pound hammer 0.76 meter (30 inches). The number of blows required to advance the sampler each foot was recorded on the boring logs. Soil samples collected from depths of 1.5 and 3.1 meters (5 and 10 feet) bgs were submitted to ATL for analytical analyses, except no sample was recovered from boring MW-5 at 3.1 meters (10 feet). These soil samples were logged and field screened with a photo-ionization detector (PID).

The borings were logged following the Unified Soil Classification System (USCS) under the supervision of a California Certified Engineering Geologist (CEG). Reproductions of the boring logs and well construction diagrams are presented as Appendix A.

Groundwater was encountered at a depth of approximately 3.1 to 4.72 meters (10 to 15.5 feet) bgs. Each soil boring was converted to a 4.6-meter-deep (15-foot-deep) groundwater monitoring well. The groundwater monitoring well was constructed using 5-cm (2-inch) diameter, schedule 40, PVC casing. The lower portion (1.5 to 4.6 meters (5 to 15 feet) bgs) of the well was constructed using 3.1 meter (10 feet) of 0.025-cm (0.010-inch) slotted screen PVC casing. A filter pack consisting of silica sand was placed around the well screen beginning at total depth to approximately 0.6 meter (2 feet) above the top of the screen. An approximately 0.45-meter (1.5-foot) seal consisting of hydrated bentonite pellets was placed on top of the filter pack. Above the bentonite seal, annular space was filled with concrete, and the well was completed using a stand pipe monument well box set in concrete. Soil cuttings generated during the installation of the monitoring well were containerized in two 208-liter (55-gallon) drums. The drums were stored onsite pending disposal. The fieldwork was performed under the direct supervision of Geocon's project manager.

3.3 Groundwater Sampling and Monitoring Well Survey

The monitoring wells were developed and sampled on May 26, 2000. Each well was developed by purging approximately 10 casing volumes for development (approximately 19 liters (5 gallons)) of groundwater from each well. The purging was accomplished utilizing a battery-operated submersible pump. The pump was decontaminated prior to use in each well by washing the pump with an Alconox solution followed by two rinses with distilled water. During the well development groundwater temperature, pH, conductivity, and turbidity were periodically recorded. The well development data sheets and monitoring well sampling data sheets are included in Appendix B.

Additional groundwater sampling events were performed on November 27, 2000 and March 29, 2001. At the time of groundwater sampling events, groundwater was measured at depths of between 2.9 and 5.0 meters (~~11.5~~ and ~~14.75~~ ^{9.5} and ^{16.4} feet) bgs. The groundwater elevation data are presented Table 1. Approximately 3 casing volumes of groundwater were purged from each well prior to sampling utilizing discrete disposable bailer. During the well purging procedure groundwater temperature, pH, conductivity, and turbidity were periodically recorded. The monitoring well sampling data sheets are included in Appendix B. A groundwater sample was collected from each monitoring well utilizing a new disposable polyethylene bailer. The groundwater sample was transferred to laboratory-provided containers, labeled, and placed in a cooler with ice for transport to ATL. The purged groundwater was containerized in a 208-liter (55-gallon) drum and stored onsite pending disposal.

On June 19, 2000, Geocon mobilized to the subject site to perform a groundwater sounding round and accompany Virgil Chavez Land Surveyor. Each well was surveyed for horizontal and vertical locations based on the datum provided by Caltrans (NAD27, and NGVD29). The surveyor's report is included as Appendix C.

3.4 Laboratory Analyses

As required by the subject TO, Geocon instructed the analytical laboratory to perform the laboratory analyses under a standard turn-around-time. Reproductions of the laboratory reports and chain of custody documentation are presented as Appendix D.

The soil and groundwater samples were analyzed for the presence of:

- TPHg, and TPHd following United States Environmental Protection Agency (EPA) Test Method 8015B;
- BTEX following EPA Test Method 8020;
- VOCs following EPA Test Method 8260B; and
- Total lead following EPA Test Method 6010
- CAM 17 metals following EPA Test Method 6010 and 7470
- Fuel Oxygenate Compounds following EPA Method 8260

QA/QC procedures were performed for each method of analysis with specificity for each analyte listed in the test method's QA/QC. The laboratory QA/QC procedures included the following:

- One method blank for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix, whichever was more frequent, with spike made at ten times the detection limit or at the analyte level.

Prior to submitting the soil samples to the laboratory, the chain-of-custody documentation was reviewed for accuracy and completeness.

4.0 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

4.1 Site Geology and Hydrogeology

Soil encountered during the drilling activities consisted of a varied fill material extending from the surface to 2.1 meters (7 feet) bgs. The layers of fill consisted of a sandy gravel extending to depths of 0.3 to 0.9 meter (1 to 3 feet) over fine-grained silt or clay material over a moist sandy gravel to gravel material over native soil. The underlying native soil consisted of a dark grayish black, very moist, soft, highly organic, sandy silt or clayey silt (Bay Mud). The Bay Mud varies in thickness from 0.9 to 2.1 meters (3 to 7 feet) thick and is underlain either by saturated gravel/coarse sand (MW-5 and MW-6) or a very stiff, sandy clay (MW-4). Beneath the saturated gravel/coarse sand in MW-5 and MW-6 is soft sandy silt. Saturated conditions were encountered in the Bay Mud at approximately 10.5 feet below grade in MW-4.

During the drilling activities, groundwater was encountered in the Bay Mud at approximately 3.2 meters (10.5 feet) bgs (MW-4) and in a gravel/coarse sand at approximately 4 to 4.7 meters (13 to 15.5 feet) bgs in MW-5 and MW-6. During the groundwater sampling, groundwater was measured at depths ranging from 2.9 to 5.0 meters bgs.

Based on the groundwater elevations, the presumed direction of the groundwater flow has varied from the southeast to the west-southwest. The groundwater gradient as ranged from approximately 0.0056 to 0.0097. The groundwater potentiometric surface contours for each sampling event are presented on Figures 3a through 3c.

4.2 Analytical Results – Soil Samples

A summary of the soil analytical laboratory test results is presented in Table 2. The laboratory analytical results for soil indicated that TPHg and TPHd were present in most soil samples. The highest TPHg concentrations in each boring were detected in the deepest (3.1-meter (10-foot)) sample and ranged from 3 mg/kg to 54 mg/kg. TPHd concentrations ranged from 1.2 mg/kg to 8.0 mg/kg. BTEX was also present in soil with benzene ranging from 18 ug/kg to 276 ug/kg. The highest concentrations of petroleum hydrocarbons were consistently present in the 3.1-meter (10-foot) samples from each boring and may be attributed to the smearing of hydrocarbons from impacted groundwater. Other VOCs were present with n-propylbenzene at the highest concentration of 280 ug/kg in the soil sample collected at 1.5 meters (5 feet) bgs in boring MW-6. All detected soil contaminants are below the respective Preliminary Remediation Goals (PRGs) established by United States Environmental Protection Agency Region 9 for residential soil.

4.3 Analytical Results – Groundwater Sample

According to the laboratory analytical data, TPHg, TPHd, BTEX, and VOCs were consistently present in each groundwater monitoring well of each sampling event with the exception of non-detectable VOCs in MW-6 for the March 2001 sampling event. The analytical data are presented in Table 3.

Low concentrations of TPHg and TPHd were present in groundwater. Benzene was present in March 2001 at concentrations ranging from 35 micrograms per liter (ug/l) (MW-5) to 52 ug/l (MW-6). MTBE was present in groundwater samples collected during the first two sample events (ranging from 1.2 ug/l to 7.0 ug/l) and no detections at all well locations in March 2001. It is noted that the May 26, 2000 analytical data for metals were reported as totals and not dissolved. Dissolved metals are reported for each subsequent sample event. Dissolved metals were also present in groundwater at low concentrations less than or near the respective Maximum Contaminant Level (MCL). Petroleum hydrocarbons, BTEX, and MTBE concentrations in groundwater are presented on Figure 4.

Benzene concentrations exceed the Maximum Contaminant Limit (MCL) (1 ug/l) in groundwater samples collected from each well. A Primary Health Goal (PHG) has been established for MTBE at a concentration of 13 ug/l. MTBE concentrations present in groundwater at the TASC0 site are less than the PHG. Concentrations of 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene each exceeded the PRG of 12 ug/l in tap water during the sampling event in May 2000; however in March 2001, 1,2,4-trimethylbenzene was not detected in any well and 1,3,5-trimethylbenzene was present only in MW-4 at 8 ug/l. Naphthalene and n-propylbenzene each exceed their respective PRGs for tap water in well MW-4 during March 2001 sampling event. The groundwater encountered at the subject property is not intended as drinking water and the MCL, PHG, and PRG values are intended only as a reference point.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The soil and groundwater analytical results are summarized as follows:

- Groundwater at the TASC0 site contains TPHg, TPHd, BTEX, MTBE, and other VOCs. The primary contaminant appears to be TPHg. As of March 2001, TPHg concentrations in groundwater range from 0.26 mg/L to 8.1 mg/L; benzene was present at concentrations ranging from 35 ug/l to 52 ug/l. Naphthalene was present at concentrations ranging from 15 ug/l to 45 ug/l during the March 2001 event, exceeding the PRG for tap water established at 6.2 ug/l. Also during the March 2001 sampling event, n-propylbenzene was detected in MW-4 at 280 ug/l, which is above the respective PRG (61 ug/l). MTBE was previously detected at the site at concentrations less than the PHG, and in March 2001 no MTBE was present. The other VOCs detected in the groundwater samples appear to be other fuel additives and are either non-regulated compounds or were detected at concentrations less than their respective regulatory threshold.
- Groundwater contaminant concentrations appear to be stabilized at the site.
- Soil at the TASC0 site has detectable concentrations of TPHg, TPHd, BTEX, and VOCs. Total lead concentrations in soil ranged from 4 mg/kg to 77 mg/kg. The TPHg, TPHd, BTEX, and VOC concentrations do not warrant additional investigation nor are the concentrations indicative of a source. The highest petroleum hydrocarbon concentrations were present in the 3.1-meter (10-foot) soil sample from each boring and may be indicative of smeared hydrocarbons from impacted groundwater.

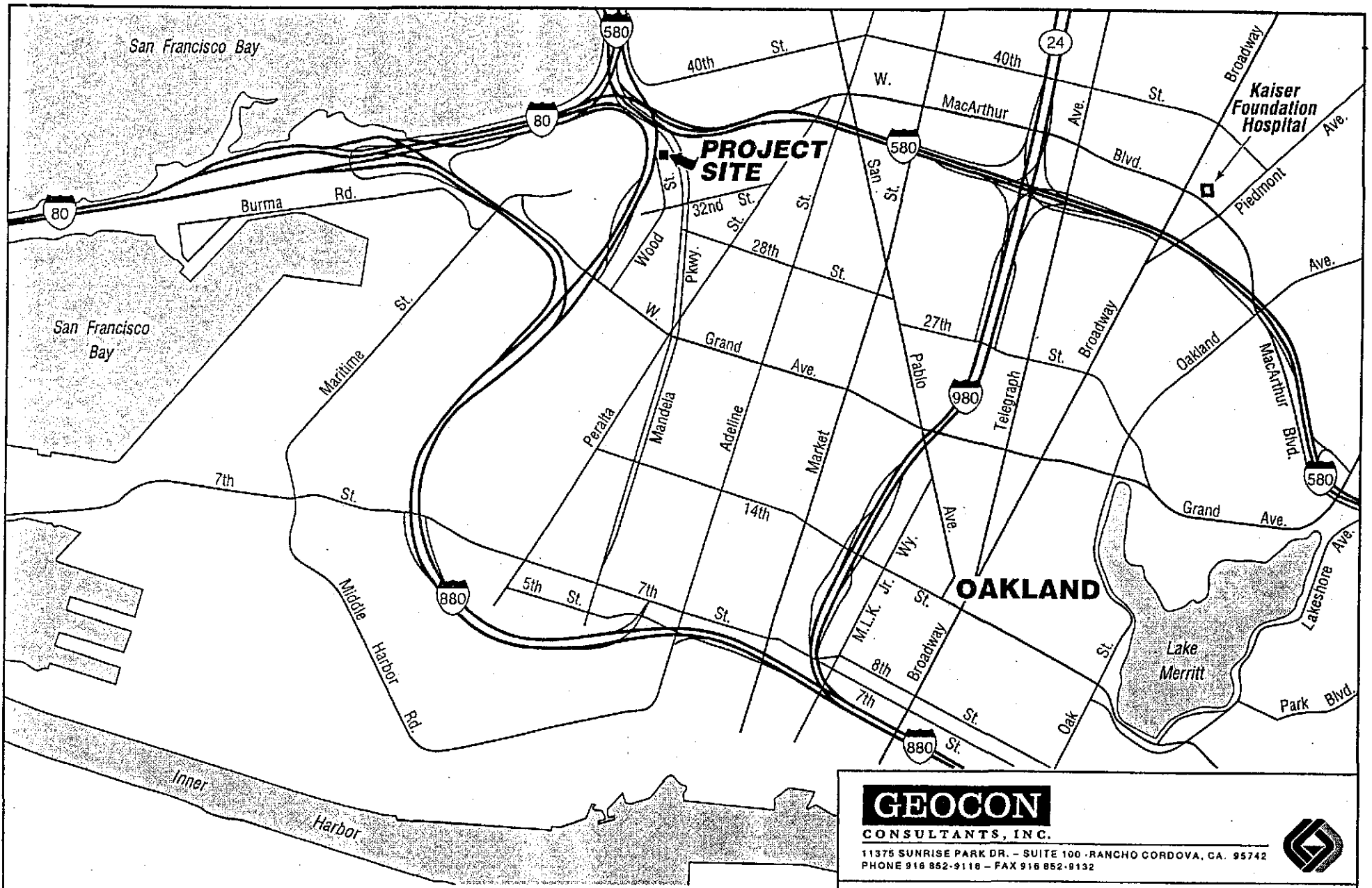
Four wells (MW-1 through MW-3 and W1) were previously installed at the TASC0 property prior to the construction of the new Cypress Freeway overpass. Since the completion of the construction project, the wells were no longer visible. It is possible that the wells were buried or damaged during the construction effort. Thus, Geocon mobilized a backhoe to the subject site to locate the missing wells. One well was located, W-1, and it was in poor condition. Geocon recommends that the well be abandoned by drill out method.

Geocon recommends that groundwater monitoring and sampling continue on a quarterly schedule for TPHg, BTEX, and VOCs.

6.0 REPORT LIMITATIONS

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report, and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered



GEOCON

CONSULTANTS, INC.

11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
 PHONE 916 852-9118 - FAX 916 852-9132



Former Thomas A. Short Company Property

3430 Wood Street
 Oakland, California

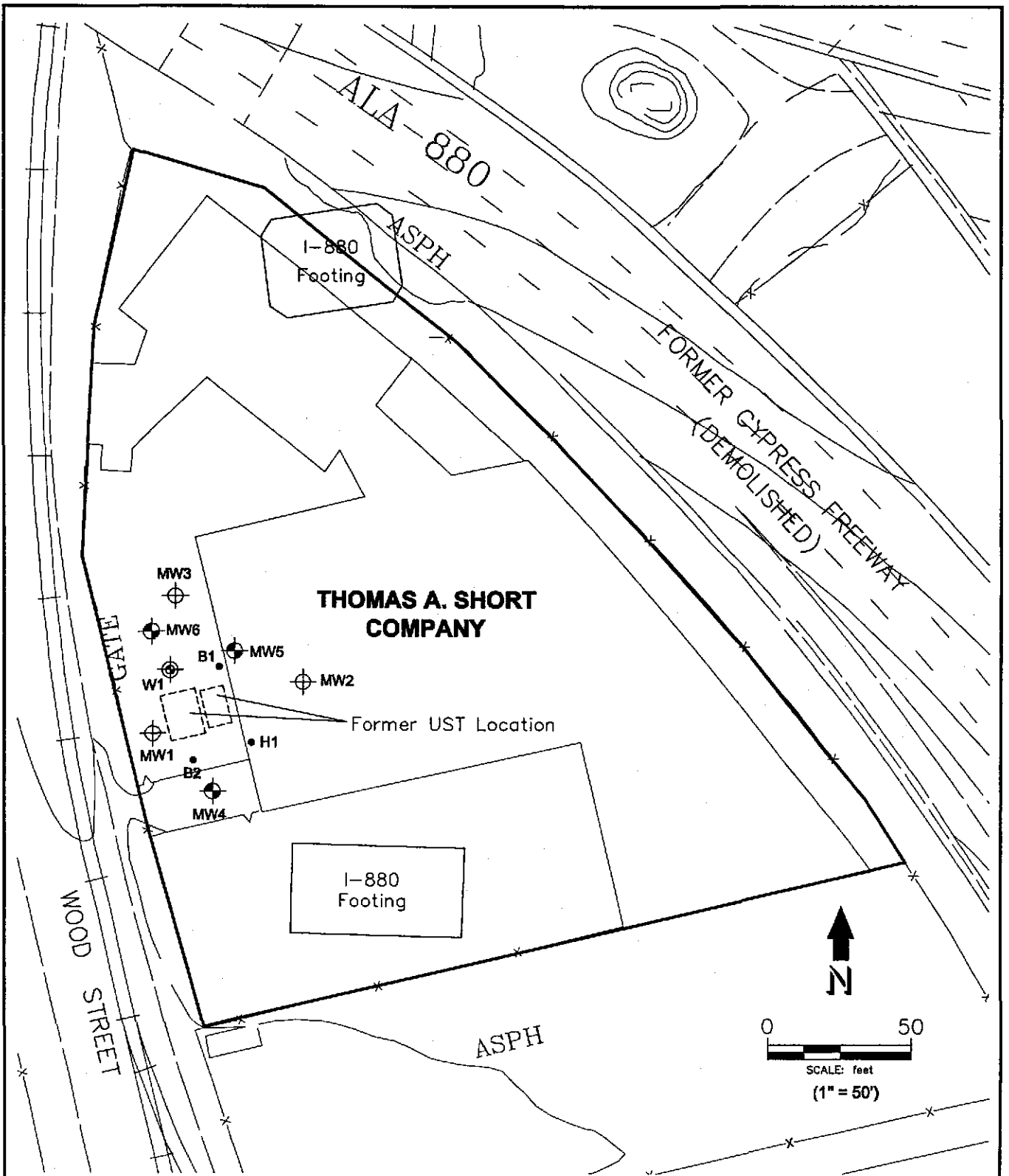
VICINITY MAP

GEOCON Proj. No. S8225-06-103





Task Order No. 04-292351-ED


May 2000

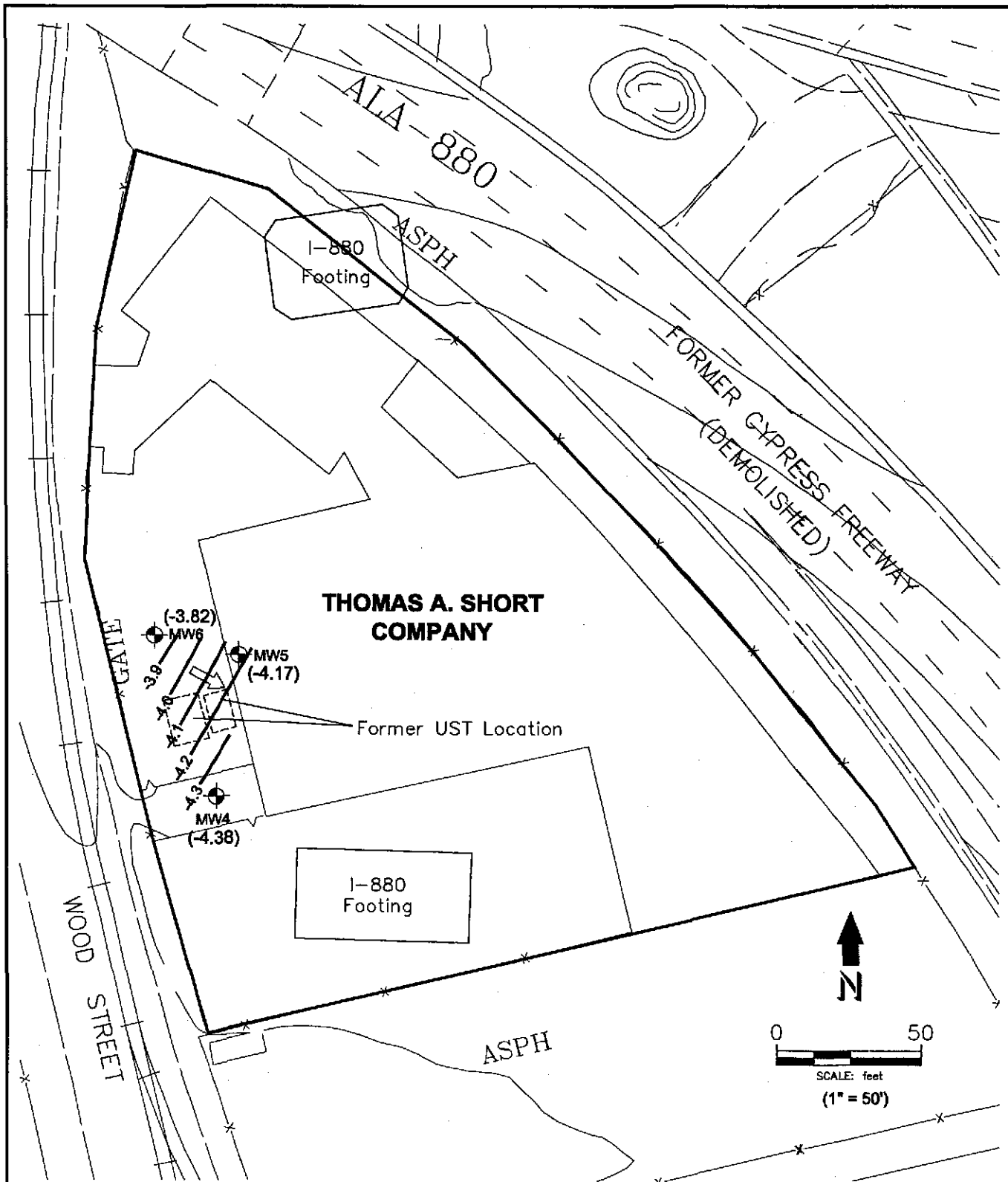
Figure 1






Legend:

- MW5  Monitoring Well Location (Geocon, May 2000)
- MW2  Monitoring Well Location (Geocon, 1996)
- W1  Existing Well to be Abandoned
- B1  Previous Boring Location

		
2358 RESEARCH DRIVE, LIVERMORE, CALIFORNIA, 94550 PHONE 925 371-5900 - FAX 925 371-5915		
Former Thomas A. Short Company Property		
3430 Wood Street Oakland, California		SITE PLAN
GEOCON Proj. No. S8225-06-103		
Task Order No. 04-190270-RM	June 2001	Figure 2



Legend:

- MW5  Monitoring Well Location (Geocon, May 2000)
- (-3.82) Groundwater Elevation (ft, msl)
- 3.9  Groundwater Elevation Contour (ft, msl)
-  Approximate Direction of Groundwater Flow

GEOCON

CONSULTANTS INC.

2356 RESEARCH DRIVE, LIVERMORE, CALIFORNIA, 94550
 PHONE 925 371-5900 - FAX 925 371-5915



Former Thomas A. Short Company Property

3430 Wood Street
 Oakland, California

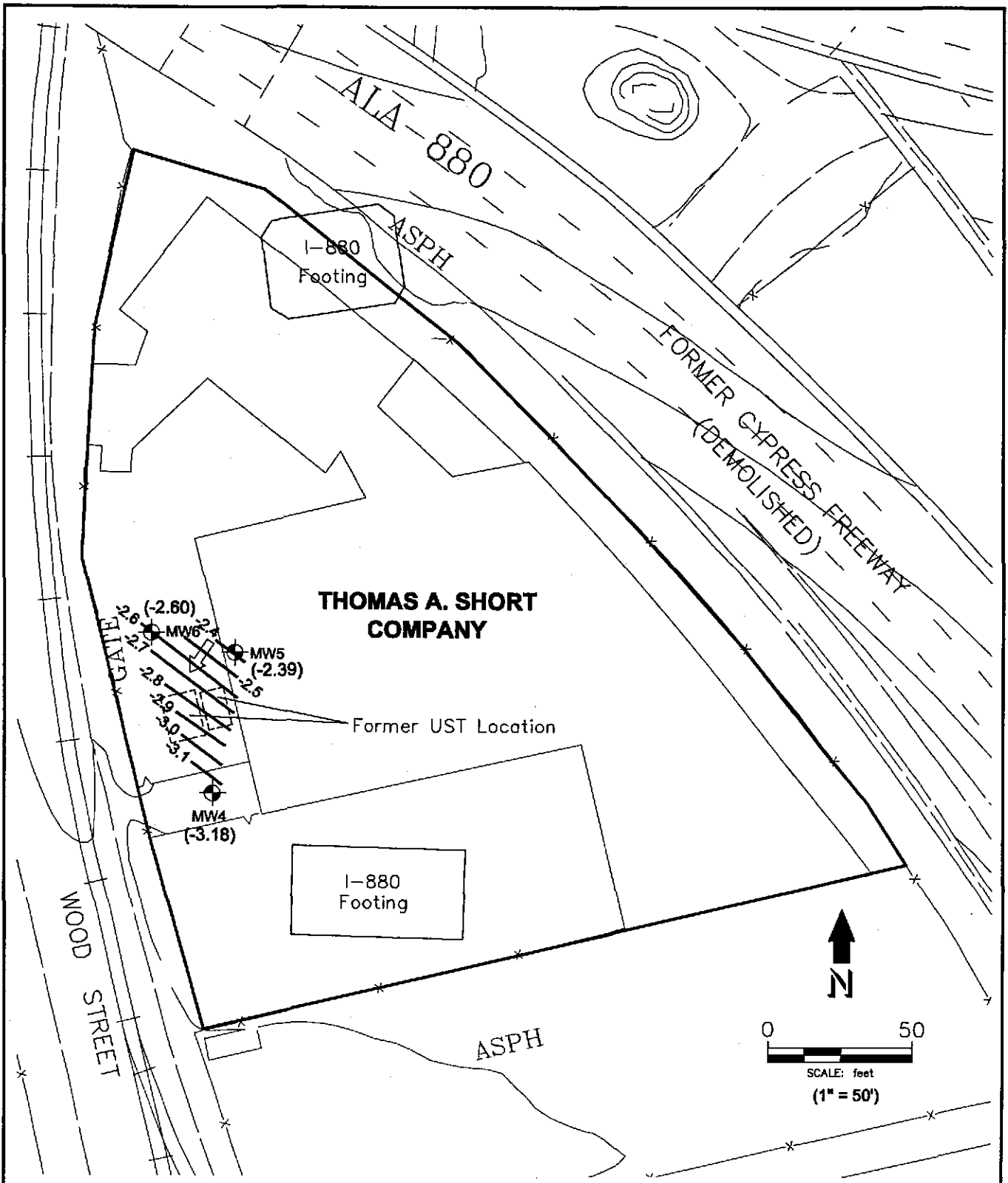
**GROUNDWATER
 POTENTIOMETRIC
 SURFACE CONTOUR
 MAP, JUNE 2000**

GEOCON Proj. No. S8225-06-103




Task Order No. 04-190270-RM


June 2001

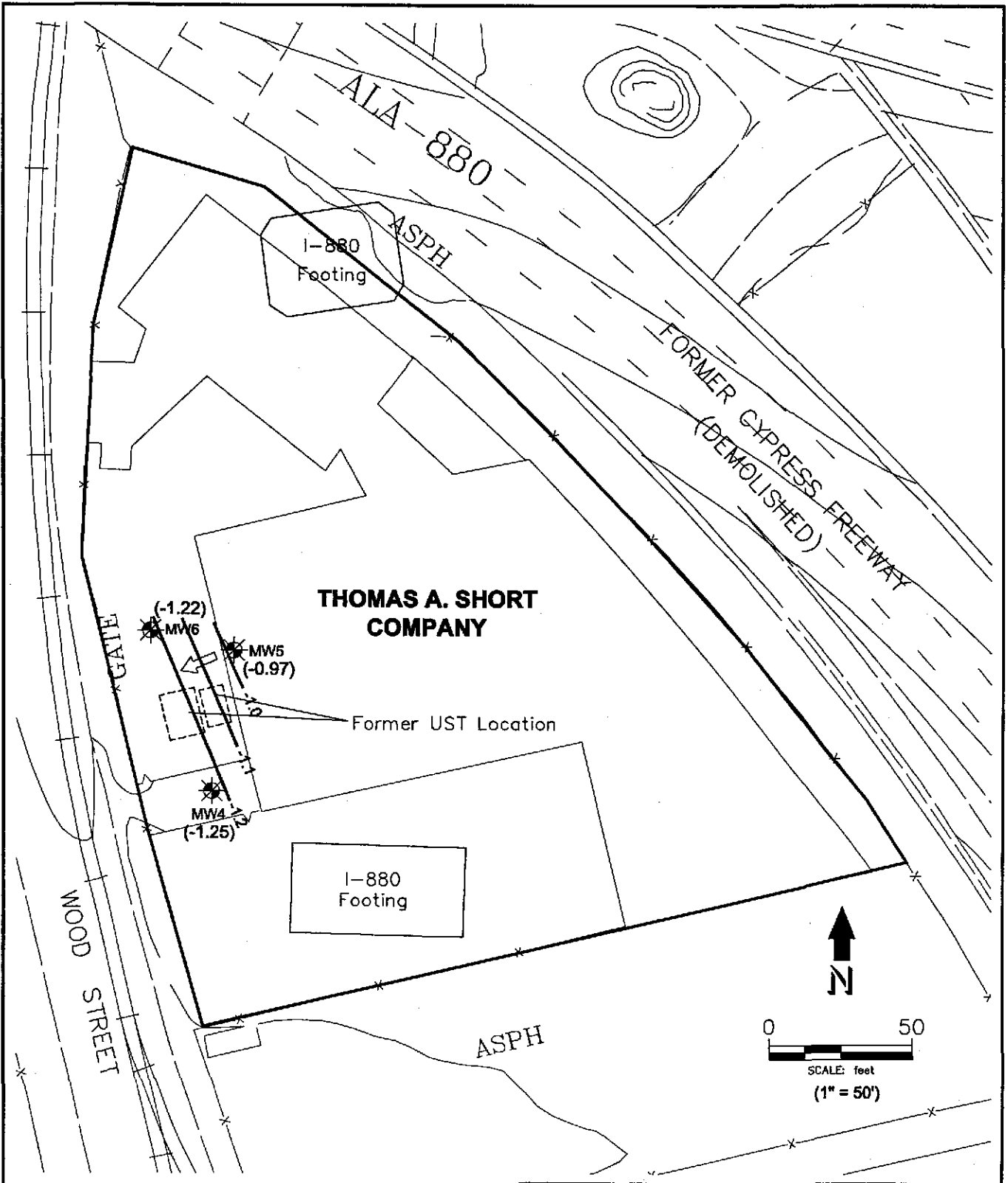
Figure 3A






Legend:


- MW5  Monitoring Well Location (Geocon, May 2000)
- (-2.60) Groundwater Elevation (ft, msl)
- 2.6  Groundwater Elevation Contour (ft, msl)
-  Approximate Direction of Groundwater Flow

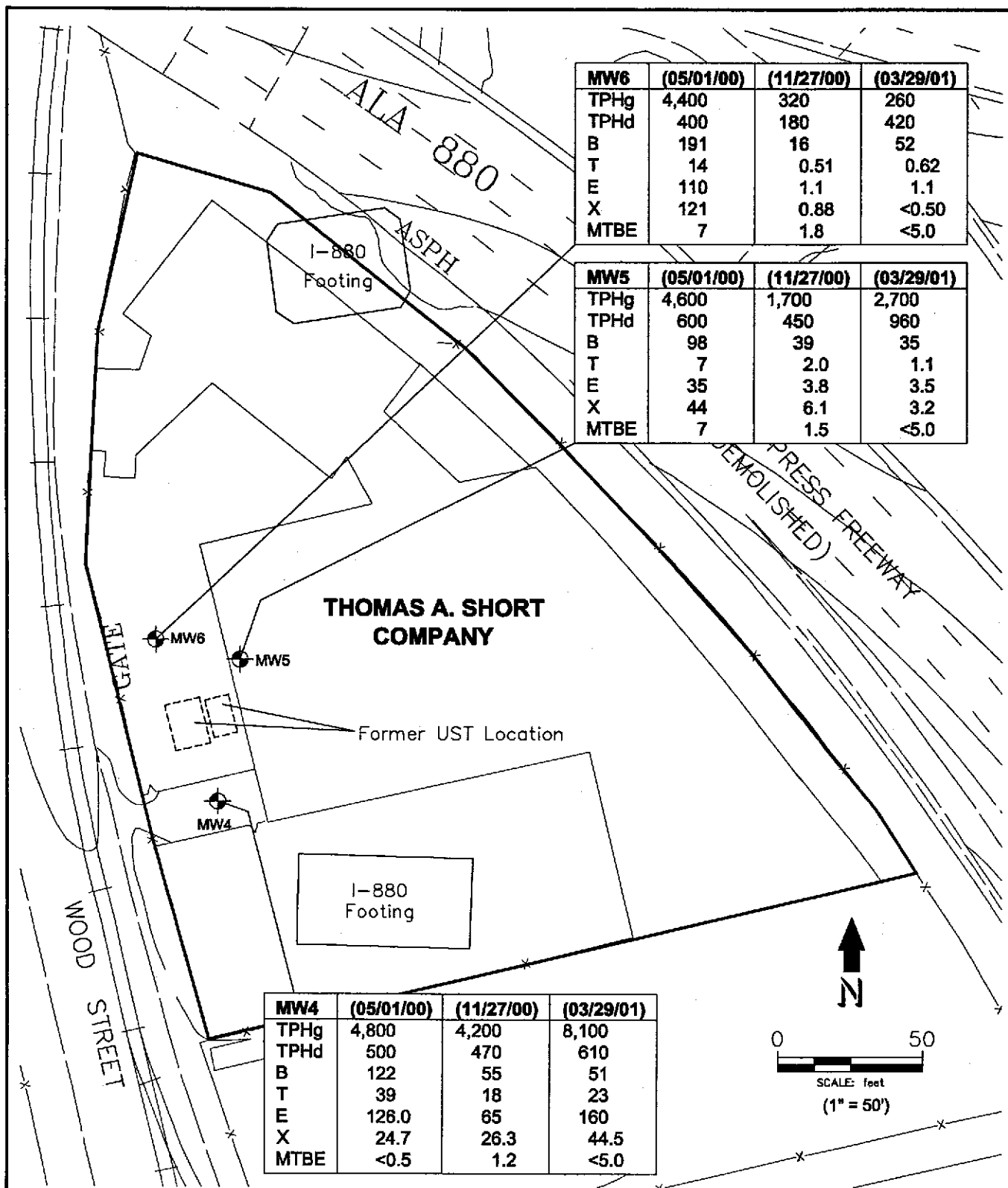
GEOCON CONSULTANTS INC. 2356 RESEARCH DRIVE, LIVERMORE, CALIFORNIA, 94550 PHONE 925 371-5900 - FAX 925 371-5915		
Former Thomas A. Short Company Property		
3430 Wood Street Oakland, California		GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP, NOVEMBER 2000
GEOCON Proj. No. S8225-06-103		
Task Order No. 04-190270-RM	June 2001	Figure 3B



Legend:

- MW5  Monitoring Well Location
(Geocon, May 2000)
- (-1.22) Groundwater Elevation (ft, msl)
- 1.2  Groundwater Elevation Contour (ft, msl)
-  Approximate Direction of Groundwater Flow

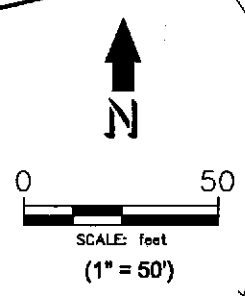
GEOCON CONSULTANTS INC. 2356 RESEARCH DRIVE, LIVERMORE, CALIFORNIA, 94550 PHONE 925 371-5900 - FAX 925 371-5915		
Former Thomas A. Short Company Property 3430 Wood Street Oakland, California		
GEOCON Proj. No. S8225-06-103		GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP, MARCH 2001
Task Order No. 04-190270-RM	June 2001	Figure 3C



MW6	(05/01/00)	(11/27/00)	(03/29/01)
TPHg	4,400	320	260
TPHd	400	180	420
B	191	16	52
T	14	0.51	0.62
E	110	1.1	1.1
X	121	0.88	<0.50
MTBE	7	1.8	<5.0

MW5	(05/01/00)	(11/27/00)	(03/29/01)
TPHg	4,600	1,700	2,700
TPHd	600	450	960
B	98	39	35
T	7	2.0	1.1
E	35	3.8	3.5
X	44	6.1	3.2
MTBE	7	1.5	<5.0

MW4	(05/01/00)	(11/27/00)	(03/29/01)
TPHg	4,800	4,200	8,100
TPHd	500	470	610
B	122	55	51
T	39	18	23
E	126.0	65	160
X	24.7	26.3	44.5
MTBE	<0.5	1.2	<5.0



Legend:

- MW5 Monitoring Well Location (Geocon, May 2000)
- TPHg Total Petroleum Hydrocarbons as gasoline
- TPHd Total Petroleum Hydrocarbons as diesel
- B Benzene
- T Toluene
- E Ethylbenzene
- X Xylenes
- MTBE Methyl tertiary butyl ether

GEOCON
CONSULTANTS INC.

2356 RESEARCH DRIVE, LIVERMORE, CALIFORNIA, 94550
PHONE 925 371-5800 - FAX 925 371-5915

Former Thomas A. Short Company Property

3430 Wood Street Oakland, California	CONCENTRATIONS OF HYDROCARBONS IN GROUNDWATER (ug/L)
GEOCON Proj. No. S8225-06-103	
Task Order No. 04-190270-RM	June 2001

Figure 4

TABLE 1
GROUNDWATER ELEVATION DATA
Former Thomas A. Short Company
Oakland, California

Monitoring Well	Measurement Date	Top Of Casing (m, NGVD29)	Top Of Casing (ft, NGVD29)	Depth to Water (m)	Depth to Water (ft)	Groundwater Elevation (m, NGVD29)	Groundwater Elevation (ft, NGVD29)
MW-4	19-Jun-00	2.54	8.33	3.87	12.71	-1.34	-4.38
	27-Nov-00	2.54	8.33	3.51	11.51	-0.97	-3.18
	29-Mar-01	2.54	8.33	2.92	9.58	-0.38	-1.25
MW-5	19-Jun-00	3.76	12.33	5.03	16.5	-1.27	-4.17
	27-Nov-00	3.76	12.33	4.49	14.72	-0.73	-2.39
	29-Mar-01	3.76	12.33	4.05	13.30	-0.30	-0.97
MW-6	19-Jun-00	3.50	11.49	4.67	15.31	-1.16	-3.82
	27-Nov-00	3.50	11.49	4.29	14.09	-0.79	-2.60
	29-Mar-01	3.50	11.49	3.87	12.71	-0.37	-1.22

m = meters

ft = feet

NGVD29 = National Geodetic Vertical Datum, 1929

TABLE 2
SUMMARY OF SOIL ANALYTICAL DATA
Former Thomas A. Short Company
Oakland, California

Sample No.	Date Collected	Depth (m)	Depth (ft)	TRPH	TPHg	TPHd	benzene	toluene	ethylbenzene	xylenes	methylene chloride	n-butylbenzene	sec-butylbenzene	tert-butylbenzene	isopropylbenzene	4-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	total lead		
				mg/kg			ug/kg																
A-1	Jun-92	0.3	1	6,600	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
A-2	Jun-92	0.5	1.5	66	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		0.9	3	180	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-1	Jun-92	1.5	5	---	1,500	520	1,400	2,400	4,500	8,400	---	---	---	---	---	---	---	---	---	---	---	---	
		2.4	8	---	ND	ND	35	7	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---
		4.1	13.5	---	ND	ND	20	7	10	30	---	---	---	---	---	---	---	---	---	---	---	---	---
B-2	Jun-92	1.5	5	---	14,000	700	500	10,000	8,000	60,000	---	---	---	---	---	---	---	---	---	---	---	---	
		2.4	8	---	ND	ND	210	5	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---
		4.1	13.5	---	1,700	ND	1,000	1,500	8,300	36,000	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 2
SUMMARY OF SOIL ANALYTICAL DATA
Former Thomas A. Short Company
Oakland, California

Sample No.	Date Collected	Depth (m)	Depth (ft)	TRPH	TPHg	TPHd	benzene	toluene	ethylbenzene	xylenes	methylene chloride	n-butylbenzene	sec-butylbenzene	tert-butylbenzene	isopropylbenzene	4-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	total lead		
				mg/kg			ug/kg																
H-1	Jun-92	0.6	2	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	
		1.5	5	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
		2.4	8	--	6	ND	230	80	200	420	--	--	--	--	--	--	--	--	--	--	--	--	--
W-1	Jun-92	1.5	5	--	ND	ND	10	ND	15	ND	--	--	--	--	--	--	--	--	--	--	--	--	
		2.4	8	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
		4.3	14	--	24	ND	10	7	70	110	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	Nov-96	0.3	1	45	<1	194	<5	<5	<5	<5	18	--	--	--	--	--	--	--	--	--	--	35	
		1.5	5	43	<1	27	<5	<5	<5	<5	14	--	--	--	--	--	--	--	--	--	--	44	
		3.0	10	12	<1	2.7	<5	<5	<5	<5	5.1	--	--	--	--	--	--	--	--	--	--	4.4	

TABLE 2
SUMMARY OF SOIL ANALYTICAL DATA
Former Thomas A. Short Company
Oakland, California

Sample No.	Date Collected	Depth (m)	Depth (ft)	TRPH	TPHg	TPHd	benzene	toluene	ethylbenzene	xylenes	methylene chloride	n-butylbenzene	sec-butylbenzene	tert-butylbenzene	isopropylbenzene	4-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	total lead		
				mg/kg			ug/kg																
MW-2	Nov-96	0.3	1	370	<1	309	<5	<5	<5	<5	13	---	---	---	---	---	---	---	---	---	---	40	
		1.5	5	360	6.0	44	<5	<5	<5	<5	<5	---	---	---	---	---	---	---	---	---	---	---	542
		3.0	10	12	<1	<1.0	<5	<5	<5	<5	15	---	---	---	---	---	---	---	---	---	---	---	4.6
MW-3	Nov-96	0.3	1	1500	<1	1,670	<5	<5	<5	<5	21	---	---	---	---	---	---	---	---	---	---	6.7	
		1.5	5	356	<1	526	<5	<5	<5	<5	45	---	---	---	---	---	---	---	---	---	---	---	18
		3.0	10	50	43	1.4	314	1,220	955	1,180	7.4	---	---	---	---	---	---	---	---	---	---	---	4.8
MW-4	May-00	1.5	5	---	<1	1.2	<5	<5	<5	<5	<5	---	---	---	---	---	---	---	---	---	---	4	
		3.0	10	---	3	1.4	107	12	253	218	<5	158	<5	<5	14	<5	8.2	8.7	47	14	14		

TABLE 2
SUMMARY OF SOIL ANALYTICAL DATA
Former Thomas A. Short Company
Oakland, California

Sample No.	Date Collected	Depth (m)	Depth (ft)	TRPH	TPHg	TPHd	benzene	toluene	ethylbenzene	xylenes	methylene chloride	n-butylbenzene	sec-butylbenzene	tert-butylbenzene	isopropylbenzene	4-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	total lead	
				mg/kg			ug/kg															
MW-5	May-00	1.5	5	--	<1	8.0	<5	<5	<5	78	<5	57	<5	<5	20	<5	35	39	168	42	77	
																						3.2
MW-6	May-00	1.5	5	---	2.1	2.0	18	8	<5	10	<5	126	59	64	166	17	<5	280	20	15	27	
		3.0	10	---	54	<1	276	15	43	44	<5	12	<5	<5	12	<5	<5	20	103	27	8	

ND = not detected
 --- = not analyzed
 g/kg = milligrams per kilogram
 ug/kg = micrograms per kilogram
 < = not detected above laboratory reporting limit
 1.7 = WET soluble lead reported in milligrams per liter (mg/L)

TABLE 3
SUMMARY OF PETROLEUM HYDROCARBON
GROUNDWATER ANALYTICAL DATA
Former Thomas A. Short Company
Oakland, California

Monitoring Well	Sample Date	TPHg (mg/L)	TPHd (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-4	26-May-00	4.8	0.5	122	39	126.0	24.7	<0.5
	27-Nov-00	4.2	0.47	55	18	65	26.3	1.2
	29-Mar-01	8.1	0.61	51	23	160	44.5	<5.0
MW-5	26-May-00	4.6	0.6	98	7	35	44	7
	27-Nov-00	1.7	0.45	39	2.0	3.8	6.1	1.5
	29-Mar-01	2.7	0.96	35	1.1	3.5	3.2	<5.0
MW-6	26-May-00	4.4	0.4	191	14	110	121	7
	27-Nov-00	0.32	0.18	16	0.51	1.1	0.88	1.8
	29-Mar-01	0.26	0.42	52	0.62	1.1	<0.50	<5.0

TPHg = Total Petroleum Hydrocarbons as gasoline
 TPHd = Total Petroleum Hydrocarbons as diesel
 MBTE = Methyl tert-Butyl Ether
 mg/L = milligrams per liter
 ug/L = micrograms per liter
 < = not detected above laboratory reporting limit

TABLE 4
SUMMARY OF VOLATILE ORGANIC COMPOUNDS
GROUNDWATER ANALYTICAL DATA (µg/L)
Former Thomas A. Short Company
Oakland, California

Monitoring Well	Sample Date	n-butylbenzene	sec-butylbenzene	tert-butylbenzene	4-chlorotoluene	isopropylbenzene	4-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene
MW-4	26-May-00	18	0.6	14	< 5	141	5	101	170	< 5	12
	27-Nov-00	7.3	<5.0	9.9	<5.0	70	<5.0	<5.0	63.0	<5.0	<5.0
	29-Mar-01	26	12	21.0	<5.0	180	8	45	280	<5.0	8
MW-5	26-May-00	21	8.2	11	< 5	29	< 5	14	31	96	51
	27-Nov-00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	29-Mar-01	<5.0	<5.0	14	<5.0	7.1	<5.0	15	11	<5.0	<5.0
MW-6	26-May-00	17	< 5	5.4	7.4	25	6.6	44	36	149	< 5
	27-Nov-00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	29-Mar-01	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

mg/L = milligrams per liter

ug/L = micrograms per liter

< = not detected above laboratory reporting limit

TABLE 5
SUMMARY OF DISSOLVED METALS
GROUNDWATER ANALYTICAL DATA (mg/L)
Former Thomas A. Short Company
Oakland, California

WELL I.D.	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
MW-4	26-May-00	---	---	---	---	---	---	---	---	0.20*	---	---	---	---	---	---	---	---
	27-Nov-00	<0.0050	0.010	0.47	<0.0010	<0.0030	0.0032	<0.003	0.010	0.0077	<0.004	0.0064	0.030	<0.0050	0.020	<0.0050	0.0034	0.070
	29-Mar-01	<0.0050	0.0094	0.33	<0.0010	<0.0030	<0.003	<0.003	0.010	<0.0050	<0.004	0.0060	0.0056	0.0	0.010	<0.0050	0.003	0.020
MW-5	26-May-00	---	---	---	---	---	---	---	---	0.33*	---	---	---	---	---	---	---	---
	27-Nov-00	<0.0050	0.030	1.2	<0.0010	0.0061	0.050	0.010	0.050	0.020	<0.004	0.010	0.10	<0.0050	0.010	<0.0050	0.050	0.010
	29-Mar-01	<0.0050	0.010	0.20	<0.001	<0.0030	<0.003	<0.003	0.010	<0.005	<0.004	<0.005	0.0062	<0.0050	0.0013	<0.005	<0.005	0.030
MW-6	26-May-00	---	---	---	---	---	---	---	---	0.40*	---	---	---	---	---	---	---	---
	27-Nov-00	<0.0050	0.0091	0.20	<0.0010	<0.0030	<0.003	0.0049	0.010	<0.0050	<0.004	0.010	0.040	<0.0050	0.010	<0.0050	0.0036	0.050
	29-Mar-01	<0.0050	0.0091	0.11	<0.0010	<0.0030	<0.003	0.0040	0.020	<0.0050	<0.004	0.0054	0.010	<0.0050	0.001	<0.0050	0.003	0.37

* Lead data was not reported as dissolved. The samples were not filtered or preserved prior to analysis.

mg/L = milligrams per liter

ug/L = micrograms per liter

< = not detected above laboratory reporting limit

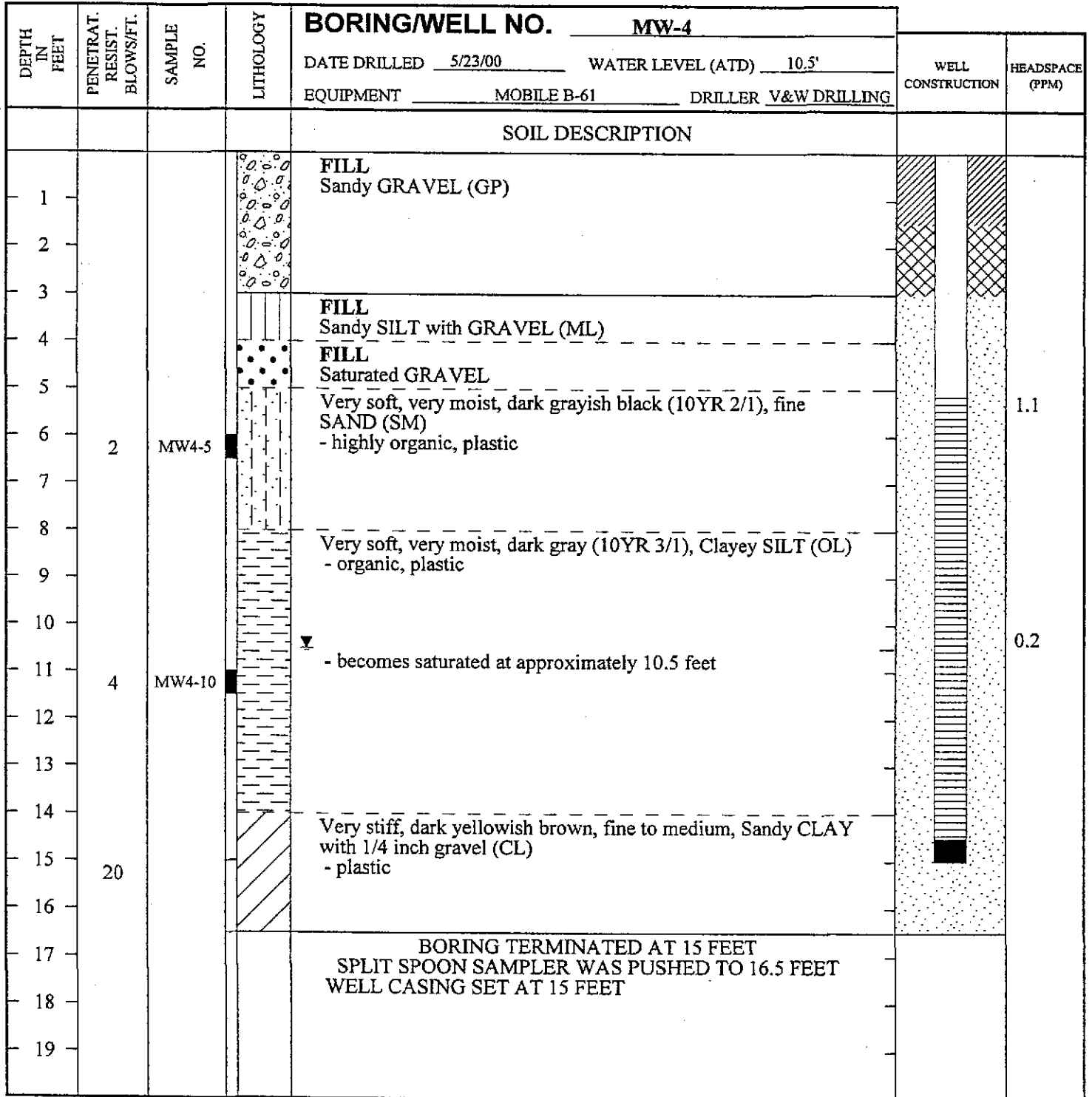


Figure A1, Log of Boring MW-4, page 1 of 1

ENV_WELL WELLS.GPJ 06/14/00

CASING ELEVATION: NA	QUANTITY OF FILTER MATERIAL: 3.5 - 90LB BAGS
DIAMETER & TYPE OF CASING: 2"	WELL SEAL & INTERVAL: BENTONITE CHIPS 1.5 - 3'
CASING INTERVAL: 0 - 5'	WELL SEAL QUANTITY: 1 40LB BAG
WELL SCREEN: 0.01"	ANNULUS SEAL/INTERVAL: READY-MIX CONCRETE 0 - 1.5'
SCREEN INTERVAL: 5 - 15'	ADDITIVES: WATER
WELL COVER: STAND PIPE MONUMENT	WELL DEPTH: 15
FILTERPACK/INTERVAL: SILICA SAND 10X20	ENGINEER/GEOLOGIST: MATT HANKO

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. S8225-06-103

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. <u>MW-5</u>		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED <u>5/23/00</u>	WATER LEVEL (ATD) <u>13.0'</u>		
				EQUIPMENT <u>MOBILE B-61</u>	DRILLER <u>V&W DRILLING</u>		
SOIL DESCRIPTION							
1				FILL Sandy GRAVEL (GP)			
2				FILL Very stiff, slightly moist, dark yellowish brown (10YR 4/2), Silty CLAY with sand (CL) - plastic			
3							
4							
5				FILL Saturated Sandy GRAVEL (GP)			
6		MWS-5					
7				Very soft, very moist, dark gray (10YR 3/1) Clayey SILT (OL) - slightly plastic, organic			poor recovery
8							
9							
10	13	NOREC					
11							
12							
13				Stiff, saturated, yellowish brown (10YR 4/2), 1/4 inch GRAVEL with clay (GP) - poorly graded			
14							
15	10			Soft, slightly moist, pale brown (10YR 5/3), Sandy SILT (ML) - slightly plastic			0
16							
17				BORING TERMINATED AT 15 FEET SPLIT SPOON SAMPLER WAS PUSHED TO 16.5 FEET WELL CASING SET AT 15 FEET			
18							
19							

Figure A2, Log of Boring MW-5, page 1 of 1

ENV_WELL_WELLS.GPJ 06/14/00

CASING ELEVATION: NA	QUANTITY OF FILTER MATERIAL: 3.5 - 90LB BAGS
DIAMETER & TYPE OF CASING: 2"	WELL SEAL & INTERVAL: BENTONITE CHIPS 1.5 - 3'
CASING INTERVAL: 3 - 5'	WELL SEAL QUANTITY: 1 40LB BAG
WELL SCREEN: 0.01"	ANNULUS SEAL/INTERVAL: READY-MIX CONCRETE 0 - 1.5'
SCREEN INTERVAL: 5 - 15'	ADDITIVES: NONE
WELL COVER: STAND PIPE MONUMENT	WELL DEPTH: 15
FILTERPACK/INTERVAL: SILICA SAND 10X20	ENGINEER/GEOLOGIST: MATT HANKO

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. <u>MW-6</u>		WELL CONSTRUCTION	HEADSPACE (PPM)	
				DATE DRILLED <u>5/23/00</u>	WATER LEVEL (ATD) <u>15.5'</u>			
				EQUIPMENT <u>MOBILE B-61</u>		DRILLER <u>V&W DRILLING</u>		
SOIL DESCRIPTION								
1				FILL Sandy GRAVEL with concrete debris (GP)			0.1	
2				FILL Stiff, slightly moist, dark grayish brown (10YR 4/1), Sandy CLAY with 5% gravel up to 1 inch in diameter (CL) - plastic				
3								
4				FILL Saturated GRAVEL				
5				Very soft, very moist, dark grayish black (10YR 3/1), Sandy SILT (OL) - organic, plastic				
6	6	MW6-5						
7								
8				Stiff, slightly moist, gray (10YR 4/1), Sandy CLAY with 1/4 to 2 inch gravel - slight petroleum odor (CL)				
9								
10							12.4	
11	11	MW6-10						
12								
13								
14								
15	11							
16				Saturated, dark yellow brown (10YR 4/2), coarse SAND (SP)			0	
17				Soft, slightly moist, pale brown (10YR 5/3), Sandy SILT (ML) - slightly plastic				
18			BORING TERMINATED AT 15 FEET SPLIT SPOON SAMPLER WAS PUSHED TO 16.5 FEET WELL CASING SET AT 15 FEET					
19								

Figure A3, Log of Boring MW-6, page 1 of 1

ENV_WELL_WELLS.GPJ 06/14/00

CASING ELEVATION: NA	QUANTITY OF FILTER MATERIAL: 3.5 - 90LB BAGS
DIAMETER & TYPE OF CASING: 2"	WELL SEAL & INTERVAL: BENTONITE CHIPS 1.5 - 3'
CASING INTERVAL: 3 - 5'	WELL SEAL QUANTITY: 1 40LB BAG
WELL SCREEN: 0.01"	ANNULUS SEAL/INTERVAL: READY-MIX CONCRETE 0 - 1.5'
SCREEN INTERVAL: 5 - 15'	ADDITIVES: NONE
WELL COVER: STAND PIPE MONUMENT	WELL DEPTH: 15
FILTERPACK/INTERVAL: SILICA SAND 10X20	ENGINEER/GEOLOGIST: MATT HANKO

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HERON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

MONITORING WELL DATA SHEET

DATE: June 19, 2000
 CLIENT: Caltrans
 FACILITY: Thomas A. Short Co.

PROJECT #: # 58225-06-103
 MILEAGE:
 FIELD TECH: Hanko
 PAGE: 1 OF 1

WELL #	MW-4	MW-5	MW-6			
TIME OPENED (24 hr)						
TIME (24 hr)						
WATER DEPTH (ft)	12.71	16.50	15.31			
WELL DEPTH (ft)						
WELL DIAMETER (in)						
WELL VOLUME (gal)						
SHEEN OR FILM						
PRODUCT THICKNESS (ft)						
FIELD SAMPLE COLOR						
PURGE						
DEVELOP						
SAMPLE						
METHOD						
PURGED WATER VOL. (gal)						
PURGED COLOR						
PURGED PROD. VOL. (gal)						
PURGE SEQUENCE						
PROD DETECT METHOD						

COMMENTS:

WELL DEVELOPMENT DATA SHEET

(fill out completely)

WELL OR LOCATION _____

PROJECT Thomas A Short SAMPLER Travis Mills DATE 5/26/00

Well / Hydrologic statistics

Well type MW-5
(MW, EW, etc.)

diameter 2
equals 48 gal/ft. casing

measured T.D. 15 T.D. (as built) 15

Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	<u>9:10</u>		
Stop	<u>9:25</u>		
Sampled (Final IWL)	<u>9:45</u>		

Purge calculation

$\frac{\text{gal/ft.} \cdot \text{ft.}}{\text{SWL to BOP or packer to BOP}} = \frac{15 \cdot 48}{\text{one volume}} = \frac{720}{10} = 72 \text{ gals.}$

Head purge calculation (Airlift only)

gal/ft. * ft. = gals.
packer to SWL

Actual gallons purged 138 Equipment Used / Sampling Method / Description of Event/Comments: Submersible pump

Actual volumes purged 4.12

Well yield \oplus _____

Conductivity

Gallons purged *	TEMP °C / °F (circle one)	EC (µs/cm)	Ph	TURBIDITY (NTU)
1	17.0	002	6.2	8.21
2	17.6	505	6.5	7.55
3	17.5	822	6.6	7.21
4	17.8	1463	6.3	7.62
5	17.9	1421	6.7	6.99
6	18.1	986	6.9	7.22
7	17.2	1199	7.5	6.21
8.				
9.				
10.				
11.				
12.				

* Take measurement at approximately each casing volume purged.

\oplus HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump. LY - Able to purge 3 volumes by returning later or next day. LY - Minimal recharge - able to purge 3 volumes.

MONITORING WELL SAMPLING DATA

Project Name:	Project Number:
Well No.: <i>MW-5</i>	Date: <i>5/26</i>
Well Diameter: <i>2</i> in.	Field Personnel: <i>TJM</i>
Casing Length: <i>15</i> feet	Screened Casing Length: feet
Well Elevation: feet MSL measured from	

PURGE CHARACTERISTICS	
Water Depth Before Pumping: <i>12.00</i> ft.	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: Gal. <i>0.48</i>	Volumes Purged:
Start Pumping Time:	End Pumping Time:
Total Time: min.	Flow Gauge: to
Total Volume Pumped: Gal.	Avg. Flow Rate: gpm
Water Depth After Pumping: feet	Time:
Dissolved Oxygen: mg/l	Free Product: (Y/N); Thickness: inches

48
5

SAMPLING CHARACTERISTICS				
Purging Method:		Sampling Method: Disposable Bailer		
Laboratory Analysis:				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (umhos/cm)	pH	Gallons Purged

comments:

WELL DEVELOPMENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW-6

PROJECT Thomas Short SAMPLER Travis Mills DATE 5/26/00

Well / Hydrologic statistics

Well type _____
(MW, EW, etc.)

diameter _____
equals _____ gal/ft. casing

SWL _____
(if above screen)

packer intake depth _____ ft.
bailer depth (circle one)

SWL _____
(if in screen)

measured T.D. _____

TOP _____

BOP _____

T.D. (as built) _____

Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	1125		
Stop <u>stop (DN)</u>	1131		
<u>start</u>	1135		
Stop	1155		
Sampled (Final IWL)	1200		

Purge calculation

_____ gal/ft. * _____ ft. = _____ gals x 10 = _____ gals.
SWL to BOP or packer to BOP one volume purge volume- 10 casings

Head purge calculation (Airlift only)

_____ gal/ft. * _____ ft. = _____ gals.
packer to SWL

Actual gallons purged _____

Actual volumes purged _____

Well yield \oplus _____

(see below)

Card

Equipment Used / Sampling Method / Description of Event/Comments:

Gallons purged *	TEMP °C/°F (circle one)	EC (µs/cm)	Ph	TURBIDITY (NTU)		
1. 1	18.3	1902	6.0	28.5		
2. 2	18.4	1212	5.5	22.4		
3. 2 1/2	17.9	1808	2.9	19.6		
4. 3	17.7	1621	6.3	16.3		
5. 3 1/2	18.1	1783	5.3	27.0		
6. 4	18.6	1402	6.9	23.9		
7. 5	17.9	1523	5.2	18.5		
8.						
9.						
10.						
11.						
12.						

* Take measurement at approximately each casing volume purged.

\oplus HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump. LY - Able to purge 3 volumes by returning later or next day. LY - Minimal recharge - unable to purge 3 volumes.

MONITORING WELL SAMPLING DATA

Project Name:	Project Number:
Well No.: <i>MW-6</i>	Date <i>5/26</i>
Well Diameter: <i>2</i> in.	Field Personnel <i>TM</i>
Casing Length: <i>15</i> feet	Screened Casing Length: feet
Well Elevation: feet MSL measured from	

PURGE CHARACTERISTICS		
Water Depth Before Pumping: <i>12.02</i> -ft.	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.	
Calculated Water Column Volume: Gal. <i>0.48</i>	Volumes Purged:	
Start Pumping Time:	End Pumping Time:	
Total Time: min.	Flow Gauge: to	
Total Volume Pumped: Gal.	Avg. Flow Rate: gpm	
Water Depth After Pumping: feet	Time:	
Dissolved Oxygen: mg/l	Free Product: (Y/N); Thickness: inches	

4.8
5

SAMPLING CHARACTERISTICS				
Purging Method:			Sampling Method: Disposable Bailer	
Laboratory Analysis:				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (umhos/cm)	pH	Gallons Purged

comments:

WELL DEVELOPMENT DATA SHEET

(fill out completely)

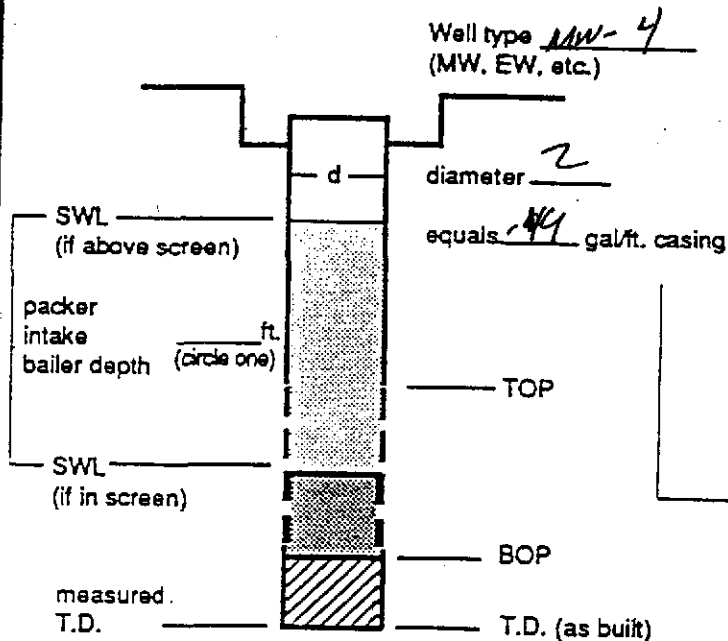
WELL OR LOCATION _____

PROJECT _____

SAMPLER _____

DATE _____

Well / Hydrologic statistics



Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	1020		
Stop (dry)	1024		
start	1030		
Stop (dry)	1031		
start	1040		
Stop (dry)	1041		
start	1052		
Stop	1053		
Sampled	1055		
(Final IWL)			

Purge calculation

$11.96 \text{ gal/ft.} \cdot 15 \text{ ft.} = 0.44 \text{ gals} \times 10 = 5 \text{ gals.}$

SWL to BOP or packer to BOP one volume purge volume - 10 casings

Head purge calculation (Air lift only)

_____ gal/ft. * _____ ft. = _____ gals.

packer to SWL

Actual gallons purged 5

Actual volumes purged 10

Well yield \oplus _____

(see below)

Equipment Used / Sampling Method / Description of Event/Comments:

pump

conductivity

Gallons purged *	TEMP °C / °F (circle one)	EC (µs / cm)	Ph	TURBIDITY (NTU)		
1. 1	18.1	1752	8.9	15.09		
2. 1 1/2	18.2	1761	8.8	17.68		
3. 2	18.0	1793	8.6	18.09		
4. 2 1/2	17.9	1699	8.1	19.13		
5. 3	17.3	1083	8.9	8.91		
6. 4	17.5	1125	9.1	11.21		
7. 5	16.9	1581	6.9	10.17		
8.						
9.						
10.						
11.						
12.						

* Take measurement at approximately each casing volume purged.

\oplus HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump. LY - Able to purge 3 volumes by returning later or next day. LY - Minimal recharge - unable to purge 3 volumes.

MONITORING WELL SAMPLING DATA

Project Name:	Project Number:
Well No.: <u>mw-4</u>	Date <u>5/26</u>
Well Diameter: <u>2</u> in.	Field Personnel <u>TM</u>
Casing Length: <u>15</u> feet	Screened Casing Length: feet
Well Elevation: feet MSL measured from	

PURGE CHARACTERISTICS	
Water Depth Before Pumping: <u>11.9</u> ft.	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: Gal. <u>0.44</u>	Volumes Purged:
Start Pumping Time:	End Pumping Time:
Total Time: min.	Flow Gauge: to
Total Volume Pumped: Gal.	Avg. Flow Rate: gpm
Water Depth After Pumping: feet	Time:
Dissolved Oxygen: mg/l	Free Product: (Y/N); Thickness: inches

4.9
5

SAMPLING CHARACTERISTICS				
Purging Method:			Sampling Method: Disposable Bailer	
Laboratory Analysis:				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (µmhos/cm)	pH	Gallons Purged

comments:

MONITORING WELL SAMPLING DATA

Project Name: <i>Thomas Short</i>	Project Number: <i>SB225-06-103</i>
Well No.: <i>MW-6</i>	Date: <i>11/27</i>
Well Diameter: <i>2</i> in.	Field Personnel: <i>TM</i>
Casing Length: <i>18.7</i> feet	Screened Casing Length: feet
Well Elevation: feet MSL measured from	

PURGE CHARACTERISTICS	
Water Depth Before Pumping: ft. <i>14.09</i>	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: Gal. <i>0.75</i>	Volumes Purged:
Start Pumping Time: <i>1057</i>	End Pumping Time:
Total Time: min.	Flow Gauge: to
Total Volume Pumped: Gal.	Avg. Flow Rate: gpm
Water Depth After Pumping: feet	Time:
Dissolved Oxygen: mg/l	Free Product: (Y/N); Thickness: inches

SAMPLING CHARACTERISTICS				
Purging Method: <i>bailer</i>		Sampling Method: Disposable Bailer		
Laboratory Analysis:				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (umhos/cm)	pH	Gallons Purged
<i>1059</i>	<i>17.9</i>	<i>907</i>	<i>7.7</i>	<i>1</i>
<i>1103</i>	<i>17.0</i>	<i>975</i>	<i>7.5</i>	<i>2</i>
<i>1107</i>	<i>17.5</i>	<i>1053</i>	<i>7.5</i>	<i>2.5</i>
<i>1200</i>	<i>Sample</i>			

comments: <i>Slight odor / Run almost dry while purging let Recharge before Sampling 1 hr</i>
<i>Tagged 15.0 before Sampling</i>

MONITORING WELL SAMPLING DATA

Project Name: <i>Thomas short</i>	Project Number: <i>SB225-06-103</i>
Well No.: <i>MW-5</i>	Date: <i>11/27</i>
Well Diameter: <i>2</i> in.	Field Personnel: <i>TM</i>
Casing Length: <i>14.2</i> feet	Screened Casing Length: feet
Well Elevation: feet MSL measured from	

PURGE CHARACTERISTICS	
Water Depth Before Pumping: <i>14.72</i> ft.	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: Gal. <i>0.73</i>	Volumes Purged:
Start Pumping Time: <i>950</i>	End Pumping Time:
Total Time: min.	Flow Gauge: to
Total Volume Pumped: Gal.	Avg. Flow Rate: gpm
Water Depth After Pumping: feet	Time:
Dissolved Oxygen: mg/l	Free Product: (Y/N); Thickness: inches

SAMPLING CHARACTERISTICS				
Purging Method: <i>bailer</i>		Sampling Method: Disposable Bailer		
Laboratory Analysis:				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (umhos/cm)	pH	Gallons Purged
<i>1038</i>	<i>18.9</i>	<i>874</i>	<i>8.3</i>	<i>1</i>
<i>1042</i>	<i>18.5</i>	<i>940</i>	<i>7.9</i>	<i>2</i>
<i>1044</i>	<i>17.8</i>	<i>962</i>	<i>7.7</i>	<i>2.5</i>
<i>1145</i>	<i>Sample</i>			

comments: <i>Slight odor Discolored water</i>
<i>let recharge 1 1/2 hr</i>
<i>Sample Depth before sampling 15.25</i>

MONITORING WELL SAMPLING DATA

Project Name: <i>Shamus Short</i>	Project Number: <i>SB225-06-103</i>
Well No.: <i>WW-4</i>	Date: <i>11/27</i>
Well Diameter: <i>2</i> in.	Field Personnel: <i>TM</i>
Casing Length: <i>15</i> feet	Screened Casing Length: feet
Well Elevation: feet MSL measured from	

PURGE CHARACTERISTICS	
Water Depth Before Pumping: <i>11.5</i> ft.	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: <i>0.56</i> Gal.	Volumes Purged:
Start Pumping Time: <i>9:30</i>	End Pumping Time:
Total Time: min.	Flow Gauge: to
Total Volume Pumped: Gal.	Avg. Flow Rate: gpm
Water Depth After Pumping: feet	Time:
Dissolved Oxygen: mg/l	Free Product: (Y/N); Thickness: inches

2

SAMPLING CHARACTERISTICS				
Purging Method: <i>bailer</i>		Sampling Method: Disposable Bailer		
Laboratory Analysis:				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (µmhos/cm)	pH	Gallons Purged
<i>9:32</i>	<i>16.3</i>	<i>412</i>	<i>7.8</i>	<i>0.5</i>
<i>9:35</i>	<i>17.1</i>	<i>506</i>	<i>7.6</i>	<i>1</i>
<i>9:41</i>	<i>17.2</i>	<i>518</i>	<i>7.5</i>	<i>2</i>
<i>11:20</i>	<i>Sample</i>			

comments: <i>well just about dry after purging</i> <i>strong odor</i> <i>let recharge 2 hrs</i> <i>water depth before sampling 11.96</i>

MONITORING WELL SAMPLING DATA

Project Name: <i>Thomas Short</i>	Project Number: 0 40751
Well No.: <i>MM-6</i>	Date: <i>3/24/00</i>
Well Diameter: <i>2</i> in.	Field Personnel: <i>YML</i>
Casing Length: <i>18.7</i> feet	Screened Casing Length: feet
Well Elevation: feet MSL measured from	

PURGE CHARACTERISTICS	
Water Depth Before Pumping: ft. <i>12.71</i>	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: Gal. <i>0.97</i>	Volumes Purged: <i>3</i>
Start Pumping Time: <i>030</i> <i>1010</i>	End Pumping Time:
Total Time: min.	Flow Gauge: to
Total Volume Pumped: Gal.	Avg. Flow Rate: gpm
Water Depth After Pumping: feet	Time:
Dissolved Oxygen: mg/l	Free Product: (Y/N); Thickness: inches

SAMPLING CHARACTERISTICS				
Purging Method: <i>bailer</i>		Sampling Method: Disposable Bailer		
Laboratory Analysis:				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (µmhos/cm)	pH	Gallons Purged
<i>030</i> <i>1014</i>	<i>16.5</i> <i>16.4</i>	<i>890</i> <i>1020</i>	<i>7.1</i> <i>6.9</i>	<i>1</i>
<i>1019</i>	<i>16.7</i>	<i>1023</i>	<i>7.4</i>	<i>2</i>
<i>1023</i>	<i>16.9</i>	<i>1019</i>	<i>7.3</i>	<i>3</i>
<i>1110</i>	<i>Sample</i>			

comments:	<i>light odor moderate turbidity</i>

MONITORING WELL SAMPLING DATA

Project Name: <i>Thomas Short</i>	Project Number:
Well No.: <i>MW-5</i>	Date: <i>3/29/01</i>
Well Diameter: <i>2</i> in.	Field Personnel: <i>RM</i>
Casing Length: <i>19.2</i> feet	Screened Casing Length: feet
Well Elevation: feet MSL measured from	

PURGE CHARACTERISTICS	
Water Depth Before Pumping: <i>133⁰</i> ft.	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: Gal. <i>0.46</i>	Volumes Purged: <i>3</i>
Start Pumping Time: <i>947</i>	End Pumping Time:
Total Time: min.	Flow Gauge: to
Total Volume Pumped: Gal.	Avg. Flow Rate: gpm
Water Depth After Pumping: feet	Time:
Dissolved Oxygen: mg/l	Free Product: (Y/N); Thickness: inches

SAMPLING CHARACTERISTICS				
Purging Method: <i>bailer</i>		Sampling Method: Disposable Bailer		
Laboratory Analysis:				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (umhos/cm)	pH	Gallons Purged
<i>951</i>	<i>15.8</i>	<i>675</i>	<i>6.5</i>	<i>1</i>
<i>954</i>	<i>16.1</i>	<i>901</i>	<i>6.5</i>	<i>2</i>
<i>959</i>	<i>16.1</i>	<i>913</i>	<i>6.4</i>	<i>3</i>
<i>1055</i>	<i>Sample</i>			

comments: <i>Heavy odor</i>
<i>dark water</i>

MONITORING WELL SAMPLING DATA

Project Name: <i>Thomas short</i>	Project Number:
Well No.: <i>MW-4</i>	Date: <i>3/24/01</i>
Well Diameter: <i>2</i> in.	Field Personnel: <i>TM</i>
Casing Length: <i>15</i> feet	Screened Casing Length: feet
Well Elevation: feet MSL measured from	

PURGE CHARACTERISTICS	
Water Depth Before Pumping: ft. <i>9.58</i>	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: Gal. <i>0.98</i>	Volumes Purged: <i>3</i>
Start Pumping Time: <i>930</i>	End Pumping Time:
Total Time: min.	Flow Gauge: to
Total Volume Pumped: Gal.	Avg. Flow Rate: gpm
Water Depth After Pumping: feet	Time:
Dissolved Oxygen: mg/l	Free Product: (Y/N); Thickness: inches

SAMPLING CHARACTERISTICS				
Purging Method: <i>buried</i>		Sampling Method: Disposable Bailer		
Laboratory Analysis:				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (umhos/cm)	pH	Gallons Purged
<i>933</i>	<i>16.5</i>	<i>890</i>	<i>6.9</i>	<i>1</i>
<i>937</i>	<i>16.3</i>	<i>964</i>	<i>6.7</i>	<i>2</i>
<i>940</i>	<i>16.3</i>	<i>799</i>	<i>6.7</i>	<i>2 1/2</i>
<i>1040</i>	<i>Sample</i>			

comments: <i>Grayish black color heavy heavy odor</i>

Virgil Chavez Land Surveying

312 Georgia Street, Suite 225
Vallejo, California 94590-5907
(707) 553-2476 • Fax (707) 553-8698

July 11, 2000
Project No. 1865-00

Matt Hanko
Geocon Consultants, Inc.
5673 W. Las Positas Blvd., Suite 205
Pleasanton, Ca. 94588

Subject: Monitoring Well Survey
3430 Wood Street
Oakland, Ca.

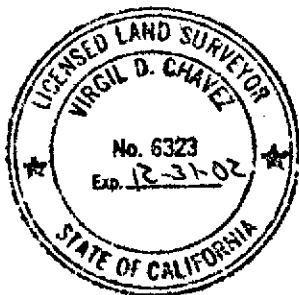
Dear Matt:

This is to confirm that we have proceeded at your request to survey the monitoring wells at the above referenced site. The survey was completed July 7, 2000. Measurement locations were marked at approximate north side of top of casing, and top of box. The coordinates and elevations are in feet, based on information provided by Cal Trans. (NAD27;NGVD29)

<u>Well No.</u>	<u>Ground Elevation</u>	<u>TOC Elevation</u>	<u>Northing</u>	<u>Easting</u>
MW - 4	8.39'	8.33'	487643.60	1483094.82
MW - 5	9.03'	12.33'	487711.31	1483105.38
MW - 6	8.50'	11.49'	487720.74	1483065.59

Additional points located at your request.

Top of Conc. Wall	487575.25	1483092.12
Top of Conc. Wall	487579.40	1483109.85
Corner of Column	487628.62	1483134.56
Corner of Column	487620.15	1483134.30
Corner of Column	487619.65	1483141.87
Corner of Column	487627.51	1483167.11
Corner of Column	487619.25	1483166.87
Corner of Column	487618.87	1483174.93



Sincerely,

Virgil D. Chavez

 Virgil D. Chavez, PLS 6323

June 6, 2000

ELAP No.: 1838

Geocon Environmental
5673 W. Las Positas Blvd, Ste 205
Pleasanton, CA 94588


ATTN: Matt Hanko

Client's Project: Thomas A Short, #S8225-06-103
Lab No.: 44258-001/005

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,


Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.



*Advanced Technology
Laboratories*

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: **Geocon Environmental**
 Attn: **Matt Hanko**

Client's Project: **Thomas A Short, #S8225-06-103**

Matrix: **Soil**
 Analyst Initials: **AP**

QC Batch #: **L008015DS262**
 Date Sampled: **05/23/00**
 Date Received: **05/25/00**
 Date Extracted: **05/31/00**
 Date Analyzed: **06/01/00**
 Extraction Method: **3550B**
 Extraction Material: **Methylene Chloride**

Method 8015B (M)/TPH (Diesel)

Lab No.:	Sample ID:	Results, mg/kg	DLR, mg/kg	Dilution Factor
Method Blank	---	ND	1.0	1.0
44258-001	MW-4@5'	1.2*	1.0	1.0
44258-002	MW-4@10'	1.4*	1.0	1.0
44258-003	MW-5@5'	8.0**	1.0	1.0
44258-004	MW-6@5'	2.0**	1.0	1.0
44258-005	MW-6@10'	ND	1.0	1.0
44258-002Dup	MW-4@10'	6.0*	1.0	1.0

MDL = Method Detection Limit
 ND = Not Detected (Below DLR).
 DLR = MDL X Dilution Factor
 * = Sample contains hydrocarbons that fall within the diesel range, but does not match the diesel pattern. However, quantitation is based on a diesel standard.
 ** = Sample contains hydrocarbons that are heavier than diesel. However, quantitation is based on a diesel standard.

Reviewed/Approved By: *C. Persaud* Date: 06/06/00

Compton Persaud
 Semi-Volatile Supervisor

Spike Recovery and RPD Summary Report - Soil (mg/kg)

Method : C:\HPCHEM\2\METHODS\LBD00526.M (Chemstation Integrator)
 Title : Diesel
 Last Update : Fri May 26 16:24:38 2000
 Response via : Initial Calibration

Non-Spiked Sample: L0601013.D

	Spike Sample	Spike Duplicate Sample
File ID :	L0601037.D	L0601039.D
Sample :	044258-001A,MS,SW631013	044258-001A,MSD,SW631013
Acq Time:	1 Jun 2000 10:31 pm	1 Jun 2000 10:56 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Diesel	37	1000	919	949	88	91	3	37	40-140

QCBATCH#L008015DS262

Reviewed/Approved by: *Compton Persaud* Date: 06/05/00
 Compton Persaud
 Department Supervisor



Client: Geocon Environmental
 Attn: Matt Hanko
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/25/00
 Matrix: SOIL
 Units: UG/KG

EPA Method 8260B														
Lab No.:	Method Blank			44258-001			44258-001Dup			44258-002			44258-003	
Client Sample I.D.:	--			MW-4@5'			MW-4@5'			MW-4@10'			MW-5@5'	
Date Sampled:	--			05/23/00			05/23/00			05/23/00			05/23/00	
QC Batch #:	P00VOCS160			P00VOCS160			P00VOCS160			P00VOCS160			P00VOCS160	
Date Analyzed:	05/28/2000			05/26/2000			05/26/2000			05/26/2000			05/26/2000	
Analyst Initials:	JPC			JPC			JPC			JPC			JPC	
Dilution Factor:	1			1			1			1			1	
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	
benzene	5	5	ND	5	ND	5	ND	5	ND	5	158	5	57	
bromobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
bromodichloromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
bromoform	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
bromomethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
n-butylbenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	13	
sec-butylbenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
tert-butylbenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
carbon tetrachloride	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
chlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
chloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
chloroform	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
chloromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
2-chlorotoluene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
4-chlorotoluene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
dibromochloromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dibromo-3-chloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dibromoethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
dibromomethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,3-dichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,4-dichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
dichlorodifluoromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1-dichloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dichloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1-dichloroethene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
cis-1,2-dichloroethene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
trans-1,2-dichloroethene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dichloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,3-dichloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
2,2-dichloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1-dichloropropene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
ethylbenzene	5	5	ND	5	ND	5	ND	5	ND	5	194	5	81	
hexachlorobutadiene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor
 NA = Not Analyzed

The cover letter is an integral part of this analytical report.



Client: Geocon Environmental
 Attn: Matt Hanko
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/25/00
 Matrix: SOIL
 Units: UG/KG

EPA Method 8260B													
Lab No.:	Method Blank			44258-001		44258-001Dup		44258-002		44258-003			
Client Sample I.D.:	-			MW-4@5'		MW-4@5'		MW-4@10'		MW-5@5'			
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
isopropylbenzene	5	5	ND	5	ND	5	ND	5	14	5	20	5	20
4-Isopropyltoluene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
methylene chloride	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
naphthalene	5	5	ND	5	ND	5	ND	5	8.2	5	35	5	35
n-propylbenzene	5	5	ND	5	ND	5	ND	5	8.7	5	39	5	39
styrene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
1,1,1,2-tetrachloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
1,1,2,2-tetrachloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
tetrachloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
toluene	5	5	ND	5	ND	5	ND	5	15	5	ND	5	ND
1,2,3-trichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
1,2,4-trichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
1,1,1-trichloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
1,1,2-trichloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
trichloroethene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
trichlorofluoromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
1,2,3-trichloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
1,2,4-trimethylbenzene	5	5	ND	5	ND	5	ND	5	47	5	166	5	166
1,3,5-trimethylbenzene	5	5	ND	5	ND	5	ND	5	14	5	42	5	42
vinyl chloride	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND
o-xylene	5	5	ND	5	ND	5	ND	5	60	5	ND	5	ND
m,p-xylene	5	5	ND	5	ND	5	ND	5	155	5	78	5	78

Matrix Spike and Matrix Spike Duplicate Report #										
Lab No.:	044258-001A-SAMP		044258-001A-MS		044258-001A-MSD					
QC Batch Number:	P00VOCS160		P00VOCS160		P00VOCS160					
ANALYTE	DLR	Results	Results	%Rec.	Results	%Rec.	RPD %	Rec. Limits	RPD Limits	Amount
1,1-dichloroethene	5	ND	97	97	73	73	28 *	58-156	20	100
benzene	5	ND	96	96	87	87	10	72-134	12	100
trichloroethene	5	ND	96	96	84	84	13	55-145	16	100
toluene	5	ND	94	94	102	102	8	73-127	16	100
chlorobenzene	5	ND	78	78 *	79	79 *	1	80-119	11	100

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor

* = Does not meet QC requirements. Batch is validated by the LCS. The LCS meets QC requirements.

Approved/Reviewed By: Edgar Morrison

Date: 6/6/00

Edgar Morrison
 Volatile Supervisor

Original sample result may be below detection limit. The result was used for % Recovery calculation purposes only.
 The cover letter is an integral part of this analytical report.



Client: Geocon Environmental
 Attn: Matt Hanko
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/25/00
 Matrix: SOIL
 Units: UG/KG

EPA Method 8260B											
Lab No.:	44258-004	44258-005	LCS								
Client Sample I.D.:	MW-6@5'	MW-6@10'	--								
Date Sampled:	05/23/00	05/23/00	--								
QC Batch #:	P00VOCS160	P00VOCS160	P00VOCS160								
Date Analyzed:	05/26/2000	05/26/2000	05/26/2000								
Analyst Initials:	JPC	JPC	JPC								
Dilution Factor:	1	1	1								
ANALYTE	MDL	DLR	Results	DLR	Results	Limits	% Recovery	DLR	Results	DLR	Results
benzene	5	5	18	5	275	21-175	99				
bromobenzene	5	5	ND	5	ND	21-175	106				
bromodichloromethane	5	5	ND	5	ND	21-175	98				
bromoform	5	5	ND	5	ND	21-175	101				
bromomethane	5	5	ND	5	ND	21-175	89				
n-butylbenzene	5	5	126	5	12	21-175	111				
sec-butylbenzene	5	5	69	5	ND	21-175	111				
tert-butylbenzene	5	5	64	5	ND	21-175	108				
carbon tetrachloride	5	5	ND	5	ND	21-175	100				
chlorobenzene	5	5	ND	5	ND	21-175	102				
chloroethane	5	5	ND	5	ND	21-175	92				
chloroform	5	5	ND	5	ND	21-175	93				
chloromethane	5	5	ND	5	ND	21-175	70				
2-chlorotoluene	5	5	ND	5	ND	21-175	104				
4-chlorotoluene	5	5	ND	5	ND	21-175	108				
dibromochloromethane	5	5	ND	5	ND	21-175	102				
1,2-dibromo-3-chloropropane	5	5	ND	5	ND	21-175	94				
1,2-dibromoethane	5	5	ND	5	ND	21-175	97				
dibromomethane	5	5	ND	5	ND	21-175	96				
1,2-dichlorobenzene	5	5	ND	5	ND	21-175	107				
1,3-dichlorobenzene	5	5	ND	5	ND	21-175	109				
1,4-dichlorobenzene	5	5	ND	5	ND	21-175	110				
dichlorodifluoromethane	5	5	ND	5	ND	21-175	67				
1,1-dichloroethane	5	5	ND	5	ND	21-175	91				
1,2-dichloroethane	5	5	ND	5	ND	21-175	95				
1,1-dichloroethene	5	5	ND	5	ND	21-175	88				
cis-1,2-dichloroethene	5	5	ND	5	ND	21-175	95				
trans-1,2-dichloroethene	5	5	ND	5	ND	21-175	93				
1,2-dichloropropane	5	5	ND	5	ND	21-175	104				
1,3-dichloropropane	5	5	ND	5	ND	21-175	100				
2,2-dichloropropane	5	5	ND	5	ND	21-175	96				
1,1-dichloropropene	5	5	ND	5	ND	21-175	106				
ethylbenzene	5	5	ND	5	43	21-175	101				
hexachlorobutadiene	5	5	ND	5	ND	21-175	115				

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor
 NA = Not Analyzed

The cover letter is an integral part of this analytical report.



Client: Geocon Environmental
 Attn: Matt Hanko
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 06/26/00
 Matrix: SOIL
 Units: UG/KG

EPA Method 8260B												
Lab No.:	44258-004		44258-005		LCS							
Client Sample I.D.:	MW-6@5'		MW-6@10'		--							
ANALYTE	MDL	DLR	Results	DLR	Results	Limits	% Recovery	DLR	Results	DLR	Results	
isopropylbenzene	5	5	155	5	12	21-175	111					
4-isopropyltoluene	5	5	17	5	ND	21-175	111					
methylene chloride	5	5	ND	5	ND	21-175	89					
naphthalene	5	5	17	5	ND	21-175	107					
n-propylbenzene	5	5	280	5	20	21-175	110					
styrene	5	5	ND	5	ND	21-175	104					
1,1,1,2-tetrachloroethane	5	5	ND	5	ND	21-175	101					
1,1,2,2-tetrachloroethane	5	5	ND	5	ND	21-175	103					
tetrachloroethane	5	5	ND	5	ND	21-175	104					
toluene	5	5	8.1	5	15	21-175	99					
1,2,3-trichlorobenzene	5	5	ND	5	ND	21-175	110					
1,2,4-trichlorobenzene	5	5	ND	5	ND	21-175	106					
1,1,1-trichloroethane	5	5	ND	5	ND	21-175	94					
1,1,2-trichloroethane	5	5	ND	5	ND	21-175	99					
trichloroethane	5	5	ND	5	ND	21-175	101					
trichlorofluoromethane	5	5	ND	5	ND	21-175	95					
1,2,3-trichloropropane	5	5	ND	5	ND	21-175	103					
1,2,4-trimethylbenzene	5	5	20	5	103	21-175	106					
1,3,5-trimethylbenzene	5	5	15	5	27	21-175	107					
vinyl chloride	5	5	ND	5	ND	21-175	85					
o-xylene	5	5	ND	5	ND	21-175	105					
m,p-xylene	5	5	10	5	44	21-175	104					

Matrix Spike and Matrix Spike Duplicate Report #												
Lab No.:	044258-001A-SAMP		044258-001A-MS		044258-001A-MSD							
QC Batch Number:	P00VOCs160		P00VOCs160		P00VOCs160							
ANALYTE	DLR	Results	DLR	Results	%Rec	Results	%Rec	RPD %	Rec Limits	RPD Limits	Amount	
1,1-dichloroethene	5	ND	97	97	73	73	73	28 *	58-156	20	100	
benzene	5	ND	96	96	87	87	87	10	72-134	12	100	
trichloroethene	5	ND	96	96	84	84	84	13	55-145	16	100	
toluene	5	ND	94	94	102	102	102	8	73-127	16	100	
chlorobenzene	5	ND	78	78 *	79	79 *	79 *	1	80-119	11	100	

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor
 * = Does not meet QC requirements. Batch is validated by the LCS. The LCS meets QC requirements.

Approved/Reviewed By: Edgar Morrison
 Edgar Morrison
 Volatile Supervisor

Date: 6/6/00

Original sample result may be below detection limit. The result was used for % Recovery calculation purposes only.
 The cover letter is an integral part of this analytical report.



Client: Geocon Environmental
 Attn: Matt Hanko
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/25/00
 Matrix: SOIL

EPA Method 8015 (a)													
Lab No.:		Method Blank		44258-001		44258-002		44258-003		44258-004			
Client Sample I.D.:		--		MW-4@5'		MW-4@10'		MW-5@5'		MW-6@5'			
Date Sampled:		--		05/23/00		05/23/00		05/23/00		05/23/00			
QC Batch #:		E008G20S141		E008G20S141		E008G20S141		E008G20S141		E008G20S141			
Date Analyzed:		06/01/00		06/01/00		06/01/00		06/01/00		06/01/00			
Analyst Initials:		MO		MO		MO		MO		MO			
Dilution Factor:		1		1		1		1		1			
ANALYTE	MDL	Units	DILF	Results	DILF	Results	DILF	Results	DILF	Results	DILF	Results	
Gasoline	1	mg/Kg	1	ND	1	ND	1	3.3 [^]	1	ND	1	2.1 [^]	
Benzene	5	ug/Kg	5	ND	5	ND	5	107	5	ND	5	ND	
Toluene	5	ug/Kg	5	ND	5	ND	5	12	5	ND	5	ND	
Ethylbenzene	5	ug/Kg	5	ND	5	ND	5	253	5	ND	5	ND	
m,p-Xylene	5	ug/Kg	5	ND	5	ND	5	170	5	ND	5	ND	
o-Xylene	5	ug/Kg	5	ND	5	ND	5	48	5	ND	5	ND	

Matrix Spike and Matrix Spike Duplicate Report													
Lab No.:		44258-004		44258-004 MS		44258-004 MSD							
QC Batch Number:		E008G20S141		E008G20S141		E008G20S141							
ANALYTE	DILF	Results	Results	%Rec	Results	%Rec	RPD	% Rec	RPD Limits	RPD Limits	Amount		
Gasoline	1	2.1	3.1	44	4.1	58	27*	41-151	21	5			
Benzene	5	ND	15	55	21	78	40*	42-132	15	27			
Toluene	5	ND	71	31	121	90	52*	45-110	15	134			

MDL = Method Detection Limit [^] Sample contains hydrocarbons that do not match the gasoline pattern. However quantitation is based upo
 ND = Not Detected (Below DLR) * Does not meet the QC requirements. Batch is validated by the LCS. The LCS meets the QC requiremetns.
 DLR = MDL x Dilution Factor

Approved/Reviewed By: Edgar Morrison

Date: 6/6/00

Volatile Supervisor

Original sample result may be below detection limit. The result was used for % Recovery calculation purposes only.
 The cover letter is an integral part of this analytical report.



Client: Geocon Environmental
 Attn: Matt Hanko
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/25/00
 Matrix: SOIL

EPA Method 8015(M)			
Lab No.:	44258-005	44258-004 Dup.	LCS
Client Sample I.D.:	MW-6@10'	MW-6@5'	--
Date Sampled:	05/23/00	05/23/00	--
QC Batch #:	E008G20S141	E008G20S141	E008G20S141
Date Analyzed:	06/01/00	06/02/00	06/02/00
Analyst Initials:	MO	MO	MO
Dilution Factor:	1	1	1

ANALYTE	MDL Units	DLR	Result	DLR	Results	Limit	% Rec
Gasoline	1 mg/Kg	1	ND	1	ND	38-148	90
Benzene	5 ug/Kg	5	54	5	ND	41-145	87
Toluene	5 ug/Kg	5	ND	5	ND	41-145	101
Ethylbenzene	5 ug/Kg	5	ND	5	ND	41-145	89
m,p-Xylene	5 ug/Kg	5	ND	5	ND	41-145	87
o-Xylene	5 ug/Kg	5	ND	5	ND	42-165	91

Matrix Spike and Matrix Spike Duplicate Report											
Lab No.:	44258-004	44258-004 MS	44258-004 MSD								
QC Batch Number:	E008G20S141	E008G20S141	E008G20S141								
ANALYTE	DLR	Results	Results	% Rec	Results	% Rec	RPD %	Rec. Limits	RPD Limits	Amount	
Gasoline	1	2.1	3.1	44	4.1	58	27*	41-151	21	5	
Benzene	5	ND	15	55	21	78	40*	42-132	15	27	
Toluene	5	ND	71	31	121	90	52*	45-110	15	134	

ND = Not Detected (Below DLR) * Does not meet the QC requirements. Batch is validated by the LCS. The LCS meets the QC requirements.
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor

Approved/Reviewed By: Edgar Morrison
 Edgar Morrison
 Volatile Supervisor

Date: 6/6/00

Original sample result may be below detection limit. The result was used for % Recovery calculation purposes only.
 The cover letter is an integral part of this analytical report.



CHAIN OF CUSTODY RECORD



**Advanced Technology
Laboratories**

1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____
 Logged By: P Date: 5-25 Time: 18:20

Method of Transport
 Walk-in
 Courier
 UPS
 FED. EXP.
 ATL

Sample Condition Upon Receipt

1. CHILLED	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	4. SEALED	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
2. HEADSPACE (VOA)	<input type="checkbox"/> Y <input type="checkbox"/> N	5. # OF SPLS MATCH COC	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
3. CONTAINER INTACT	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	6. PRESERVED	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N

Client: Geocom Address: 5673 Wilas Positas TEL: (925) 469-9750
 Attn: Matt Hanko City: Pleasanton State: CA Zip Code: 94588 FAX: (925) 469-9749

Project Name: Thomas A. Short Project #: 58225-06-103 Sampler: Matt Hanko (Printed Name) [Signature] (Signature)

Relinquished by: [Signature] Date: 5-24-00 Time: 4:00pm Received by: [Signature] Date: 5-24-00 Time: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

I hereby authorize ATL to perform the work indicated below:
 Project Mgr / Submitter: [Signature] Date: 5-24-00
 Print Name: Matt Hanko Signature: [Signature]

Send Report To:
 Attn: Matt Hanko
 Co: Geocom
 Address: Pleasanton
 City: _____ State: _____ Zip: _____

Bill To:
 Attn: SAA
 Co: _____
 Address: _____
 City: _____ State: _____ Zip: _____

Special Instructions/Comments: _____

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
 Laboratory Standard
 Other
 Return To: _____

* \$10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested	CIRCLE APPROPRIATE MATRIX										PRESERVATION	QA/QC					
	8091 / 8092 (Pesticides/PCB/SC)	8280 (Nitrates/GCM/MS)	825 / 8270 (BNA-GC/MS)	Meths Total (CAC-8010 / 7000)	8015M TPH/GT/TEX (COMEN/MTOW)	8015M TPH/D (Diesel/SC)	SOLID (SOIL) / SLUDGE	OIL / SOLVENT / LIQUID	WATER / WASTEWATER	DRINKING WATER			AIR	WIPE / FILTER	OTHER	TAT	Container(s) #
<u>Total Lead (at 10')</u>																	
	X			X	X	X											
	X			X	X	X											
	X			X	X	X											
	X			X	X	X											

ITEM	LAB USE ONLY:		Sample Description			
	Batch #:	Lab No.	Sample I.D.	Date	Time	
		<u>48258-001</u>	<u>MW-4 @ 5'</u>	<u>5/24/00</u>	<u>PM</u>	
		<u>002</u>	<u>MW-4 @ 10'</u>			
		<u>003</u>	<u>MW-5 @ 5'</u>			
		<u>004</u>	<u>MW-6 @ 5'</u>			
		<u>005</u>	<u>MW-6 @ 10'</u>			

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO₃ S=H₂SO₄ C=4°C Z=Zn(AC) O=NaOH T=Na₂S₂O₈

ELAP No.: 1838

Geocon Environmental
5673 W. Las Positas Blvd, Ste 205
Pleasanton, CA 94588

ATTN: Matt Hanko

Client's Project: Thomas A. Short, #S8225-06-103
Lab No.: 45649-001/002

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,



Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Date: 8/4/00

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.



Advanced Technology
Laboratories

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CHAIN OF CUSTODY RECORD



**Advanced Technology
Laboratories**

1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport

- Walk-in
- Courier
- UPS
- FED. EXP.
- ATL

Sample Condition Upon Receipt

- | | | | |
|---------------------|---|------------------------|---|
| 1. CHILLED | <input type="checkbox"/> Y <input type="checkbox"/> N | 4. SEALED | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 2. HEADSPACE (VOA) | <input type="checkbox"/> Y <input type="checkbox"/> N | 5. # OF SPLS MATCH COC | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 3. CONTAINER INTACT | <input type="checkbox"/> Y <input type="checkbox"/> N | 6. PRESERVED | <input type="checkbox"/> Y <input type="checkbox"/> N |

Client: Geokon Environmental Address: 5673 W. Las Positas Blvd. TEL: (925) 469-9250
 Attn: Matt Hanka City: Pleasanton State: CA Zip Code: 94588 FAX: (925) 469-9249

Project Name: Thomas A Short Project #: 58225-06-103 Sampler: _____ (Printed Name) _____ (Signature)

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

I hereby authorize ATL to perform the work indicated below:
 Project Mgr /Submitter:

 Print Name _____ Date _____
 Signature _____

Send Report To:
 Attn: Matt Hanka
 Co: _____
 Address _____
 City _____ State _____ Zip _____

Bill To:
 Attn: _____
 Co: _____
 Address _____
 City _____ State _____ Zip _____

Special Instructions/Comments:

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
 Laboratory Standard
 Other _____
 Return To: _____

* \$10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested 8087 / 8082 (Pesticides/PCB/OC) 8280 (Volatiles/CC/MS) 825 / 8270 (EPA-CC/MS) Metals Total (CAC-CC/MS) 8015M (PHCB/TEX (COMBINATORY)) 8015M (PMD (Dissol-CC)) <u>WFT Pb</u>	CIRCLE APPROPRIATE MATRIX		CONTAINER(S) # Type	PRESERVATION RTNE <input type="checkbox"/> RWOCB <input type="checkbox"/> WIP <input type="checkbox"/> NAVY <input type="checkbox"/> CT <input checked="" type="checkbox"/> OTHER
	SOLID <input checked="" type="checkbox"/> SLUDGE OIL • SOLVENT • LIQUID WATER • WASTEWATER DRINKING WATER AIR WIPE • FILTER OTHER	TAT # Type		

ITEM	LAB USE ONLY:		Sample Description		
	Batch #:	Lab No.	Sample I.D.	Date	Time
		45649-001	44258-003/MW-505	5/23	
		2	44258-004/MW-605	5/23	

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays **E= Routine 7 Workdays**

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO₃ S=H₂SO₄ C=4°C Z=Zn(AC)₂ O=NaOH T=Na₂S₂O₃

FAX



Date *July 27, 2000*

Number of pages including cover sheet *1*

TO: *cheryl*

Phone
Fax Phone

CC

FROM: **Matt Hanks**
Geocon Consultants, Inc.
5673 W. Las Positas Boulevard
Suite 205
Pleasanton, California 94588
Phone *925.469.9750*
Mobile Phone *925.785-5021*
Fax Phone *925.469.9749*

REMARKS: Urgent For your review Reply ASAP Please Comment

For Lab No. 44258-003 and 44258-004 please run samples for WET analysis for lead.

June 8, 2000

ELAP No.: 1838

Geocon Environmental
11375 Sunrise Park Drive, Suite 100
Rancho Cordova, CA 95742

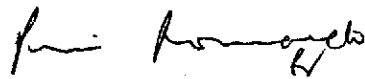
ATTN: Amy Hester

Client's Project: Thomas A Short, #S8225-06-103
Lab No.: 44327-001/006

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,



Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.



Advanced Technology
Laboratories

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: Geocon Environmental
 Attn: Amy Hester
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/27/00
 Matrix: WATER
 Units: UG/L

EPA Method 8260B												
Lab No.:	Method Blank		44327-001		44327-003		44327-005		44327-005Dup			
Client Sample I.D.:	--		MW-5		MW-4		MW-6		MW-6			
Date Sampled:	--		05/26/00		05/26/00		05/26/00		05/26/00			
QC Batch #:	Q00VOCW105		Q00VOCW105		Q00VOCW105		Q00VOCW105		Q00VOCW105			
Date Analyzed:	05/30/2000		05/30/2000		05/30/2000		05/30/2000		05/30/2000			
Analyst Initials:	DJK		DJK		DJK		DJK		DJK			
Dilution Factor:	1		1		1		1		1			
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	
benzene	5	5	ND	5	112	5	154	5	242	5	240	
bromobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
bromodichloromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
bromoform	5	5	ND	5	ND	5	ND	5	ND	5	ND	
bromomethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
n-butylbenzene	5	5	ND	5	21	5	15	5	17	5	16	
sec-butylbenzene	5	5	ND	5	8.2	5	8.6	5	ND	5	ND	
tert-butylbenzene	5	5	ND	5	11	5	14	5	5.4	5	5.4	
carbon tetrachloride	5	5	ND	5	ND	5	ND	5	ND	5	ND	
chlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
chloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
chloroform	5	5	ND	5	ND	5	ND	5	ND	5	ND	
chloromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
2-chlorotoluene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
4-chlorotoluene	5	5	ND	5	ND	5	ND	5	7.4	5	7.3	
dibromochloromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dibromo-3-chloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dibromoethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
dibromomethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,3-dichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,4-dichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
dichlorodifluoromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1-dichloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dichloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1-dichloroethene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
cis-1,2-dichloroethene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
trans-1,2-dichloroethene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2-dichloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,3-dichloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
2,2-dichloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1-dichloropropene	5	5	ND	5	ND	5	ND	5	ND	5	ND	
ethylbenzene	5	5	ND	5	37	5	154	5	135	5	134	
hexachlorobutadiene	5	5	ND	5	ND	5	ND	5	ND	5	ND	

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor

The cover letter is an integral part of this analytical report.



Client: Geocon Environmental
 Attn: Amy Hester
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/27/00
 Matrix: WATER
 Units: UG/L

EPA Method 8260B														
Lab No.:	Method Blank			44327-001			44327-003			44327-005			44327-005Dup	
Client Sample I.D.:	--			MW-5			MW-4			MW-6			MW-6	
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	
Isopropylbenzene	5	5	ND	5	29	5	141	5	25	5	25	5	26	
4-Isopropyltoluene	5	5	ND	5	ND	5	6.0	5	5.6	5	5.6	5	5.6	
methylene chloride	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
naphthalene	5	5	ND	5	14	5	101	5	44	5	44	5	39	
n-propylbenzene	5	5	ND	5	31	5	170	5	36	5	36	5	38	
styrene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1,1,2-tetrachloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1,2,2-tetrachloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
tetrachloroethene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
toluene	5	5	ND	5	6.5	5	47	5	13	5	13	5	13	
1,2,3-trichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2,4-trichlorobenzene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1,1-trichloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,1,2-trichloroethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
trichloroethene	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
trichlorofluoromethane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2,3-trichloropropane	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
1,2,4-trimethylbenzene	5	5	ND	5	96	5	ND	5	149	5	149	5	172	
1,3,5-trimethylbenzene	5	5	ND	5	51	5	12	5	80	5	80	5	81	
vinyl chloride	5	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	
o-xylene	5	5	ND	5	ND	5	7.4	5	15	5	15	5	15	
m,p-xylene	5	5	ND	5	43	5	17	5	114	5	114	5	121	

Matrix Spike and Matrix Spike Duplicate Report #

Lab No.:	Method Blank			Blank MS			Blank MSD						
QC Batch Number:	Q00VOCW105			Q00VOCW105			Q00VOCW105						
ANALYTE	DLR	Results	Results	%Rec.	Results	%Rec.	RPD %	Rec. Limits	RPD Limits	Amount			
1,1-dichloroethene	5	ND	106	106	108	108	2	61-151	21	100			
benzene	5	ND	107	107	110	110	3	73-131	15	100			
trichloroethene	5	ND	102	102	106	106	4	72-128	15	100			
toluene	5	ND	106	106	108	108	2	63-140	14	100			
chlorobenzene	5	ND	101	101	102	102	1	81-115	11	100			

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor

Approved/Reviewed By: _____

[Signature]

Edgar Morrison

Volatiles Supervisor

Date: 6/8/00

Original sample result may be below detection limit. The result was used for % Recovery calculation purposes only.
 The cover letter is an integral part of this analytical report.



Client: Geocon Environmental
 Attn: Amy Hester
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/27/00
 Matrix: WATER
 Units: UG/L

EPA Method 3260B													
Lab No.:	LCS												
Client Sample I.D.:	--												
Date Sampled:	--												
QC Batch #:	Q00VOCW105												
Date Analyzed:	05/30/2000												
Analyst Initials:	DJK												
Dilution Factor:	1												
ANALYTE	MDL	Limit	% Rec	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
benzene	5	21-176	109										
bromobenzene	5	21-175	89										
bromodichloromethane	5	21-175	96										
bromoform	5	21-175	98										
bromomethane	5	21-175	94										
n-butylbenzene	5	21-175	83										
sec-butylbenzene	5	21-175	83										
tert-butylbenzene	5	21-175	79										
carbon tetrachloride	5	21-175	92										
chlorobenzene	5	21-175	101										
chloroethane	5	21-175	111										
chloroform	5	21-175	85										
chloromethane	5	21-175	114										
2-chlorotoluene	5	21-175	85										
4-chlorotoluene	5	21-175	87										
dibromochloromethane	5	21-175	95										
1,2-dibromo-3-chloropropane	5	21-175	83										
1,2-dibromoethane	5	21-175	106										
dibromomethane	5	21-175	106										
1,2-dichlorobenzene	5	21-175	88										
1,3-dichlorobenzene	5	21-175	88										
1,4-dichlorobenzene	5	21-175	89										
dichlorodifluoromethane	5	21-175	97										
1,1-dichloroethane	5	21-175	93										
1,2-dichloroethane	5	21-175	93										
1,1-dichloroethene	5	21-175	105										
cis-1,2-dichloroethene	5	21-175	98										
trans-1,2-dichloroethene	5	21-175	104										
1,2-dichloropropane	5	21-175	108										
1,3-dichloropropane	5	21-175	101										
2,2-dichloropropane	5	21-175	89										
1,1-dichloropropene	5	21-175	107										
ethylbenzene	5	21-175	101										
hexachlorobutadiene	5	21-175	81										

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor

The cover letter is an integral part of this analytical report.



Client: Geocon Environmental
 Attn: Amy Hester
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/27/00
 Matrix: WATER
 Units: UG/L

EPA Method 8260B											
Lab No.:	LCS										
Client Sample I.D.:	-										
ANALYTE	MDL	Limits	%Rec	DLR	Results	DLR	Results	DLR	Results	DLR	Results
isopropylbenzene	5	21-175	88								
4-isopropyltoluene	5	21-175	81								
methylene chloride	5	21-175	100								
naphthalene	5	21-175	90								
n-propylbenzene	6	21-175	88								
styrene	5	21-175	104								
1,1,1,2-tetrachloroethane	5	21-175	94								
1,1,2,2-tetrachloroethane	5	21-175	92								
tetrachloroethene	5	21-175	106								
toluene	5	21-175	109								
1,2,3-trichlorobenzene	5	21-175	83								
1,2,4-trichlorobenzene	5	21-175	86								
1,1,1-trichloroethane	5	21-175	86								
1,1,2-trichloroethane	5	21-175	104								
trichloroethene	5	21-175	104								
trichlorofluoromethane	5	21-175	92								
1,2,3-trichloropropane	5	21-175	89								
1,2,4-trimethylbenzene	5	21-175	83								
1,3,5-trimethylbenzene	5	21-175	85								
vinyl chloride	5	21-175	108								
o-xylene	5	21-175	101								
m,p-xylene	5	21-175	103								

Matrix Spike and Matrix Spike Duplicate Report #											
Lab No.:	Method Blank		Blank MS		Blank MSD						
QC Batch Number:	Q00VOCW105		Q00VOCW105		Q00VOCW105						
ANALYTE	DLR	Results	Results	%Rec	Results	%Rec	RPD %	Rec. Limits	RPD Limits	Amount	
1,1-dichloroethene	5	ND	106	106	108	108	2	61-151	21	100	
benzene	5	ND	107	107	110	110	3	73-131	15	100	
trichloroethene	5	ND	102	102	106	106	4	72-128	15	100	
toluene	5	ND	106	106	108	108	2	63-140	14	100	
chlorobenzene	5	ND	101	101	102	102	1	81-115	11	100	

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor

Approved/Reviewed By: Edgar Morrison

Date: 6/8/00

Edgar Morrison
 Volatiles Supervisor

Original sample result may be below detection limit. The result was used for % Recovery calculation purposes only.
 The cover letter is an integral part of this analytical report.



Client: Geocon Environmental
 Attn: Amy Hester
 Client's Project: Thomas A Short, #S8225-06-103
 Date Received: 05/27/00
 Matrix: WATER

EPA Method 8015/M/8020					
Lab No.:	Method Blank	44327-001	44327-003	44327-005	LCS
Client Sample I.D.:	---	MW-5	MW-4	MW-6	--
Date Sampled:	---	05/26/00	05/26/00	05/26/00	--
QC Batch #:	I008G20W087	I008G20W087	I008G20W087	I008G20W087	I008G20W087
Date Analyzed:	05/31/2000	06/01/2000	06/01/2000	06/01/2000	06/01/2000
Analyst Initials:	IMG	IMG	IMG	IMG	IMG
Dilution Factor:	1	1	1	1	1

ANALYTE	MDL	Units	DLR	Results	DLR	Results	DLR	Results	DLR	Results	Limits	%Rec
Gasoline	0.05	mg/L	0.05	ND	0.05	4.6*	0.05	4.8*	0.05	4.4*	57-129	93
Benzene	0.5	ug/L	0.5	ND	0.5	88	0.5	122	0.5	191	46-132	101
Toluene	0.5	ug/L	0.5	ND	0.5	7.0	0.5	39	0.5	14	46-132	100
Ethylbenzene	0.5	ug/L	0.5	ND	0.5	35	0.5	126	0.5	110	46-132	98
m,p-Xylene	0.5	ug/L	0.5	ND	0.5	39	0.5	17	0.5	107	46-132	99
o-Xylene	0.5	ug/L	0.5	ND	0.5	4.7	0.5	7.3	0.5	14	46-132	103
MTBE	0.5	ug/L	0.5	ND	0.5	6.6	0.5	ND	0.5	6.8	30-156	101

Matrix Spike and Matrix Spike Duplicate Report #											
Lab No.:	MBLK	BLANK MS	BLANK MSD								
QC Batch Number:	I008G20W087	I008G20W087	I008G20W087								
ANALYTE	DLR	Results	Results	%Rec	Results	%Rec	RPD %	Rec. Limits	RPD Limits	Amount	
Gasoline	0.05	ND	1.0	98	0.9	90	9	54-135	18	1	
Benzene	0.5	ND	5.5	101	5.5	101	0	59-134	7	5.5	
Toluene	0.5	ND	30	101	30	100	1	59-146	15	30	

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL x Dilution Factor

*Sample contains hydrocarbons that do not match the gasoline pattern.
 However, quantitation is based on a gasoline standard.

Approved/Reviewed By: Edgar Morrison
 Edgar Morrison
 Volatiles Supervisor

Date: 6/8/00

Original sample result may be below detection limit. The result was used for % Recovery calculation purposes only.
 The cover letter is an integral part of this analytical report.



Spike Recovery and RPD Summary Report - WATER (MG/L)

Method : C:\HPCHEM\2\METHODS\LBD00526.M (Chemstation Integrator)
 Title : Diesel
 Last Update : Fri May 26 15:59:15 2000
 Response via : Initial Calibration

Non-Spiked Sample: L0531071.D

Spike Sample	Spike Duplicate Sample
File ID : L0531093.D	L0531095.D
Sample : 000531BLKW3,MS,SW631013	000531BLKW3,MSD,SW631013
Acq Time: 1 Jun 2000 4:44 am	1 Jun 2000 5:09 am

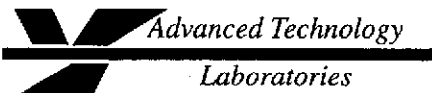
Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Diesel	0.0	1000	1286	1249	128	124	3	23	42-142

QCBATCH#L008015DW260

Reviewed/Approved by: Edgar Morrison for Date: 06/08/00
 Edgar Morrison
 Department Supervisor



CHAIN OF CUSTODY RECORD



1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____	Method of Transport Walk-in <input type="checkbox"/> Courier <input type="checkbox"/> UPS <input type="checkbox"/> FED. EXP. <input type="checkbox"/> ATL <input type="checkbox"/>	Sample Condition Upon Receipt 1. CHILLED Y <input type="checkbox"/> N <input type="checkbox"/> 4. SEALED Y <input type="checkbox"/> N <input type="checkbox"/> 2. HEADSPACE (VOA) Y <input type="checkbox"/> N <input type="checkbox"/> 5. # OF SPLS MATCH COC Y <input type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT Y <input type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED Y <input type="checkbox"/> N <input type="checkbox"/>
P.O.#: _____		
Logged By: _____ Date: _____ Time: _____		

Client: GEOCON ENVIRONMENTAL - SACRAMENTO	Address: 11375 Sunrise Park Drive, Suite 100	TEL: (916) 852-9118
Attn: _____	City: Rancho Cordova State: CA Zip Code: 95742	FAX: (916) 852-9132

Project Name: <i>Thomas A Short</i>	Project #: <i>SD225-06-103</i>	Sampler: <i>Travis Mills</i> (Printed Name)	(Signature) <i>[Signature]</i>
Relinquished by: (Signature and Printed Name) <i>[Signature]</i>	Date: <i>5/26</i> Time: <i>1500</i>	Received by: (Signature and Printed Name) <i>[Signature]</i>	Date: <i>5/26</i> Time: <i>1700</i>
Relinquished by: (Signature and Printed Name)	Date: _____ Time: _____	Received by: (Signature and Printed Name)	Date: _____ Time: _____
Relinquished by: (Signature and Printed Name)	Date: _____ Time: _____	Received by: (Signature and Printed Name)	Date: _____ Time: _____

SHIP TO LAB: (SUB CONTRACT) _____	I hereby authorize ATL to perform the work indicated below: Project Mgr /Submitter: _____ Print Name _____ Date: _____	Send Report To: Attn: _____ Co: _____ Address _____ City _____ State _____ Zip _____	Special Instructions/Comments:
TEST: _____			
ATL #: _____			
DATE: _____			
CLIENT I.D. _____			

Unless otherwise requested, all samples will be disposed 45 days after receipt.	Sample Archive/Disposal: <input type="checkbox"/> Laboratory Standard <input type="checkbox"/> Other _____ <input type="checkbox"/> Return To: _____ * \$10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.	Circle or Add Analysis(es) Requested <i>6018010 (Halogenated Volatiles-GC) 6028020/8 TEX (Aromatic Volatiles-GC) 6038080 (Pesticides/PCB-GC) 6248240 (Volatiles-GC/MS) 6250 (Volatiles-GC/MS) 6258270 (BNA-GC/MS) 6258 (TPH/TPH-TX) 418 T (TPH-R) Metals Total (CAC-6010/7000) <i>LEAD</i></i>	CIRCLE APPROPRIATE MATRIX SOLID • SOIL • SLUDGE OIL • SOLVENT • LIQUID WATER • WASTEWATER DRINKING WATER AIR WIFE • FILTER OTHER TAT	PRESERVATION RTNE <input type="checkbox"/> RWQCB <input type="checkbox"/> WIP <input type="checkbox"/> NAVY <input type="checkbox"/> CT <input checked="" type="checkbox"/> OTHER <input checked="" type="checkbox"/>
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ITEM	LAB USE ONLY:		Sample Description				CIRCLE APPROPRIATE MATRIX										PRESERVATION	REMARKS							
	Batch #:	Lab No.	Sample I.D.	Date	Time	6018010	6028020/8	6038080	6248240	6250	6258270	6258	418 T	Metals Total	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID			WATER • WASTEWATER	DRINKING WATER	AIR	WIFE • FILTER	OTHER	TAT	#
		44327-001	MW-5	5/26	445		X	X				X			X								4	V	G H
		002	MW-5		945						X				X								1	L	G C
		003	MW-4		1055		X	X				X			X								4	V	G H
		004	MW-4		1055						X				X								1	L	G C
		005	MW-6		1700		X	X				X			X								4	V	G H
		006	MW-6								X				X								1	L	G C
			T.B.	5/26	1735																		1	V	G H

• TAT starts 8 a.m. following day if samples received after 5 p.m.	TAT: A= Overnight ≤ 24 hr	B= Emergency Next workday	C= Critical 2 Workdays	D= Urgent 3 Workdays	E= Routine 7 Workdays	Preservatives: H=Hcl N=HNO ₃ S=H ₂ SO ₄ C=4°C Z=Zn(AC) ₂ O=NaOH T=Na ₂ S ₂ O ₃
Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal						

ELAP No.: 1838

Geocon Environmental
5673 W. Las Positas Blvd, Ste 205
Pleasanton, CA 94588


ATTN: Matt Hanko

Client's Project: Thomas Short, #S8225-06-103
Lab No.: 48159-001/003

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,


Cheryl De Los Reyes
Technical Operations Manager
CDR/dg

Date: 12/8/05

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.



Advanced Technology
Laboratories

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CHAIN OF CUSTODY RECORD



**Advanced Technology
Laboratories**

1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____	Method of Transport Walk-in <input type="checkbox"/> Courier <input type="checkbox"/> UPS <input type="checkbox"/> FED. EXP. <input type="checkbox"/> ATL <input type="checkbox"/>	Sample Condition Upon Receipt 1. CHILLED Y <input type="checkbox"/> N <input type="checkbox"/> 4. SEALED Y <input type="checkbox"/> N <input type="checkbox"/> 2. HEADSPACE (VOA) Y <input type="checkbox"/> N <input type="checkbox"/> 5. # OF SPLS MATCH COC Y <input type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT Y <input type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED Y <input type="checkbox"/> N <input type="checkbox"/>
Logged By: _____ Date: _____ Time: _____		

Client: GEOCON	Address: 5673 W Las Positas Blvd Ste 205	TEL: () _____
Attn: Matt Hawks	City Pleasanton CA State 94588 CA Zip Code 94588	FAX: () _____

Project Name: Thomas Short	Project #: SP025-06-103 SP000-06-	Sampler: Travis Mills (Printed Name)	(Signature) <i>[Signature]</i>
Relinquished by: Travis Mills (Signature and Printed Name)	Date: 11/27/00 Time: 1700	Received by: [Signature] (Signature and Printed Name)	Date: 11/27 Time: 1700
Relinquished by: _____ (Signature and Printed Name)	Date: _____ Time: _____	Received by: _____ (Signature and Printed Name)	Date: _____ Time: _____
Relinquished by: _____ (Signature and Printed Name)	Date: _____ Time: _____	Received by: _____ (Signature and Printed Name)	Date: _____ Time: _____

I hereby authorize ATL to perform the work indicated below: Project Mgr /Submitter: Travis Mills <i>[Signature]</i> Print Name <u>Travis Mills</u> Date <u>11/27/00</u> Signature _____	Send Report To: Attn: _____ Co: _____ Address _____ City _____ State _____ Zip _____	Bill To: Attn: _____ Co: _____ Address _____ City _____ State _____ Zip _____	Special Instructions/Comments: MITSE 8020 Filter & Preserve Metals within 48hrs of sampling time 2°C
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ITEM	LAB USE ONLY:		Sample Description				CIRCLE APPROPRIATE MATRIX										PRESERVATION	REMARKS							
	Batch #:	Lab No.	Sample I.D.	Date	Time	CIRCLE APPROPRIATE MATRIX																			
						8091 / 8092 (Pesticides PCB GC)	8200 (Volatile Organics GC/MS)	821 / 8270 (BVA-GC/MS)	Metals-Total (CAC-8010 / 7000)	8015M (PFAS/TEX COMBINATION)	8015M (PFAS/TEX DIESTER GC)	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR			WIPE • FILTER	OTHER	TAT	#	Type		
	40159-001C		MW-4	11/27	1120	X	X															E	5	VIGH	
	1B		MW-4		1120		X	X															3	LIGC	Filter & preserve for metals
	022R		MW-5		1145		X	X															5	VIGH	
	2B		MW-5		1145		X	X															3	LIGC	"
	023R		MW-6		1200		X	X															5	VIGH	
	3B		MW-6		1200		X	X															3	LIGC	"

• TAT starts 8 a.m. following day if samples received after 5 p.m.	TAT: A= Overnight ≤ 24 hr	B= Emergency Next workday	C= Critical 2 Workdays	D= Urgent 3 Workdays	E= Routine 7 Workdays	Preservatives: H=HCl N=HNO ₃ S=H ₂ SO ₄ C=4°C Z=Zn(AC) ₂ O=NaOH T=Na ₂ S ₂ O ₃
Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal						

Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-4

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 11:20:00 AM

Lab ID: 048159-001A

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

RunID: GC6_001201A	BatchID: I008G20W214	PrepDate:	Analyst: JPC
GRO	4.2	0.050	mg/L
			1
			12/1/00

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8020A

RunID: GC6_001201A	BatchID: I008G20W214	PrepDate:	Analyst: JPC
Benzene	55	0.50	µg/L
Ethylbenzene	65	0.50	µg/L
m,p-Xylene	21	0.50	µg/L
MTBE	1.2	0.50	µg/L
o-Xylene	5.3	0.50	µg/L
Toluene	18	0.50	µg/L

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-5

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 11:45:00 AM

Lab ID: 048159-002A

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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GASOLINE RANGE ORGANICS BY GC/FID		EPA 8015B(M)				
RunID: GC6_001201A	BatchID: I008G20W214	PrepDate:	Analyst: JPC			
GRO	1.7	0.050	mg/L	1	12/1/00	

VOLATILE ORGANIC COMPOUNDS BY GC/PID		EPA 8020A				
RunID: GC6_001201A	BatchID: I008G20W214	PrepDate:	Analyst: JPC			
Benzene	39	0.50	µg/L	1	12/1/00	
Ethylbenzene	3.8	0.50	µg/L	1	12/1/00	
m,p-Xylene	4.4	0.50	µg/L	1	12/1/00	
MTBE	1.5	0.50	µg/L	1	12/1/00	
o-Xylene	1.7	0.50	µg/L	1	12/1/00	
Toluene	2.0	0.50	µg/L	1	12/1/00	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-6

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 12:00:00 PM

Lab ID: 048159-003A

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID		EPA 8015B(M)				
RunID: GC6_001201A	BatchID: I008G20W214	PrepDate:	Analyst: JPC			
GRO	0.32	0.050		mg/L	1	12/1/00
VOLATILE ORGANIC COMPOUNDS BY GC/PID		EPA 8020A				
RunID: GC6_001201A	BatchID: I008G20W214	PrepDate:	Analyst: JPC			
Benzene	16	0.50		µg/L	1	12/1/00
Ethylbenzene	1.1	0.50		µg/L	1	12/1/00
m,p-Xylene	0.88	0.50		µg/L	1	12/1/00
MTBE	1.8	0.50		µg/L	1	12/1/00
o-Xylene	ND	0.50		µg/L	1	12/1/00
Toluene	0.51	0.50		µg/L	1	12/1/00

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored, Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental
Lab Order: 048159
Project: Thomas Short - S8225-06-103
Lab ID: 048159-001B

Client Sample ID: MW-4
Collection Date: 11/27/00 11:20:00 AM
Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID		EPA 8015B(M)				
RunID: GC7_001130A	BatchID: 2154			PrepDate: 11/29/00		Analyst: AP
Diesel	0.47	0.050		mg/L	1	11/30/00

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: 




Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental **Client Sample ID:** MW-5
Lab Order: 048159
Project: Thomas Short - S8225-06-103 **Collection Date:** 11/27/00 11:45:00 AM
Lab ID: 048159-002B **Matrix:** WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID		EPA 8015B(M)				
RunID: GC7_001130A	BatchID: 2154			PrepDate: 11/29/00		Analyst: AP
Diesel	0.45	0.050		mg/L	1	11/30/00

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike/Surrogate outside of limits due to matrix interference.
J - Analyte detected below quantitation limits H - Samples exceeding analytical holding time
B - Analyte detected in the associated Method Blank E - Value above quantitation range
DO - Surrogate Diluted Out M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental
Lab Order: 048159
Project: Thomas Short - S8225-06-103
Lab ID: 048159-003B

Client Sample ID: MW-6
Collection Date: 11/27/00 12:00:00 PM
Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID		EPA 8015B(M)				
RunID: GC7_001130A	BatchID: 2154			PrepDate: 11/29/00		Analyst: AP
Diesel	0.18	0.050		mg/L	1	11/30/00

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-4

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 11:20:00 AM

Lab ID: 048159-001A

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_001201A BatchID: Q00VOCW242 PrepDate: Analyst: DJK

Di-isopropyl ether	ND	5.0		µg/L	1	12/1/00
Ethyl tert-butyl ether	ND	5.0		µg/L	1	12/1/00
MTBE	ND	5.0		µg/L	1	12/1/00
Tert-amyl methyl ether	ND	5.0		µg/L	1	12/1/00
Tert-Butanol	ND	200		µg/L	1	12/1/00

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_001201A BatchID: Q00VOCW242 PrepDate: Analyst: DJK

1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	1	12/1/00
1,1,1-Trichloroethane	ND	5.0		µg/L	1	12/1/00
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	12/1/00
1,1,2-Trichloroethane	ND	5.0		µg/L	1	12/1/00
1,1-Dichloroethane	ND	5.0		µg/L	1	12/1/00
1,1-Dichloroethene	ND	5.0		µg/L	1	12/1/00
1,1-Dichloropropene	ND	5.0		µg/L	1	12/1/00
1,2,3-Trichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,2,3-Trichloropropane	ND	5.0		µg/L	1	12/1/00
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,2,4-Trimethylbenzene	ND	5.0		µg/L	1	12/1/00
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	12/1/00
1,2-Dibromoethane	ND	5.0		µg/L	1	12/1/00
1,2-Dichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,2-Dichloroethane	ND	5.0		µg/L	1	12/1/00
1,2-Dichloropropane	ND	5.0		µg/L	1	12/1/00
1,3,5-Trimethylbenzene	ND	5.0		µg/L	1	12/1/00
1,3-Dichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,3-Dichloropropane	ND	5.0		µg/L	1	12/1/00
1,4-Dichlorobenzene	ND	5.0		µg/L	1	12/1/00
2,2-Dichloropropane	ND	5.0		µg/L	1	12/1/00
2-Chlorotoluene	ND	5.0		µg/L	1	12/1/00
4-Chlorotoluene	ND	5.0		µg/L	1	12/1/00
4-Isopropyltoluene	ND	5.0		µg/L	1	12/1/00
Benzene	47	5.0		µg/L	1	12/1/00
Bromobenzene	ND	5.0		µg/L	1	12/1/00
Bromodichloromethane	ND	5.0		µg/L	1	12/1/00
Bromoform	ND	5.0		µg/L	1	12/1/00
Bromomethane	ND	5.0		µg/L	1	12/1/00
Carbon tetrachloride	ND	5.0		µg/L	1	12/1/00

Qualifiers: ND - Not Detected at the Reporting Limit
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 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental
 Lab Order: 048159
 Project: Thomas Short - S8225-06-103
 Lab ID: 048159-001A

Client Sample ID: MW-4
 Collection Date: 11/27/00 11:20:00 AM
 Matrix: WATER

Analyses Result Limit Qual Units DF Date Analyzed

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_001201A BatchID: Q00VOCW242 PrepDate: Analyst: DJK

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Chlorobenzene	ND	5.0		µg/L	1	12/1/00
Chloroethane	ND	5.0		µg/L	1	12/1/00
Chloroform	ND	5.0		µg/L	1	12/1/00
Chloromethane	ND	5.0		µg/L	1	12/1/00
cis-1,2-Dichloroethene	ND	5.0		µg/L	1	12/1/00
Dibromochloromethane	ND	5.0		µg/L	1	12/1/00
Dibromomethane	ND	5.0		µg/L	1	12/1/00
Dichlorodifluoromethane	ND	5.0		µg/L	1	12/1/00
Ethylbenzene	47	5.0		µg/L	1	12/1/00
Hexachlorobutadiene	ND	5.0		µg/L	1	12/1/00
Isopropylbenzene	70	5.0		µg/L	1	12/1/00
m,p-Xylene	16	5.0		µg/L	1	12/1/00
Methylene chloride	ND	5.0		µg/L	1	12/1/00
n-Butylbenzene	7.3	5.0		µg/L	1	12/1/00
n-Propylbenzene	63	5.0		µg/L	1	12/1/00
Naphthalene	ND	5.0		µg/L	1	12/1/00
o-Xylene	ND	5.0		µg/L	1	12/1/00
sec-Butylbenzene	ND	5.0		µg/L	1	12/1/00
Styrene	ND	5.0		µg/L	1	12/1/00
tert-Butylbenzene	9.9	5.0		µg/L	1	12/1/00
Tetrachloroethene	ND	5.0		µg/L	1	12/1/00
Toluene	15	5.0		µg/L	1	12/1/00
trans-1,2-Dichloroethene	ND	5.0		µg/L	1	12/1/00
Trichloroethene	ND	5.0		µg/L	1	12/1/00
Trichlorofluoromethane	ND	5.0		µg/L	1	12/1/00
Vinyl chloride	ND	5.0		µg/L	1	12/1/00

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-5

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 11:45:00 AM

Lab ID: 048159-002A

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_001201A

BatchID: Q00VOCW242

PrepDate:

Analyst: DJK

Di-isopropyl ether	ND	5.0		µg/L	1	12/1/00
Ethyl tert-butyl ether	ND	5.0		µg/L	1	12/1/00
MTBE	ND	5.0		µg/L	1	12/1/00
Tert-amyl methyl ether	ND	5.0		µg/L	1	12/1/00
Tert-Butanol	ND	200		µg/L	1	12/1/00

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_001201A

BatchID: Q00VOCW242

PrepDate:

Analyst: DJK

1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	1	12/1/00
1,1,1-Trichloroethane	ND	5.0		µg/L	1	12/1/00
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	12/1/00
1,1,2-Trichloroethane	ND	5.0		µg/L	1	12/1/00
1,1-Dichloroethane	ND	5.0		µg/L	1	12/1/00
1,1-Dichloroethene	ND	5.0		µg/L	1	12/1/00
1,1-Dichloropropene	ND	5.0		µg/L	1	12/1/00
1,2,3-Trichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,2,3-Trichloropropane	ND	5.0		µg/L	1	12/1/00
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,2,4-Trimethylbenzene	ND	5.0		µg/L	1	12/1/00
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	12/1/00
1,2-Dibromoethane	ND	5.0		µg/L	1	12/1/00
1,2-Dichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,2-Dichloroethane	ND	5.0		µg/L	1	12/1/00
1,2-Dichloropropane	ND	5.0		µg/L	1	12/1/00
1,3,5-Trimethylbenzene	ND	5.0		µg/L	1	12/1/00
1,3-Dichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,3-Dichloropropane	ND	5.0		µg/L	1	12/1/00
1,4-Dichlorobenzene	ND	5.0		µg/L	1	12/1/00
2,2-Dichloropropane	ND	5.0		µg/L	1	12/1/00
2-Chlorotoluene	ND	5.0		µg/L	1	12/1/00
4-Chlorotoluene	ND	5.0		µg/L	1	12/1/00
4-Isopropyltoluene	ND	5.0		µg/L	1	12/1/00
Benzene	25	5.0		µg/L	1	12/1/00
Bromobenzene	ND	5.0		µg/L	1	12/1/00
Bromodichloromethane	ND	5.0		µg/L	1	12/1/00
Bromoform	ND	5.0		µg/L	1	12/1/00
Bromomethane	ND	5.0		µg/L	1	12/1/00
Carbon tetrachloride	ND	5.0		µg/L	1	12/1/00

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology
Laboratories

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-5

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 11:45:00 AM

Lab ID: 048159-002A

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_001201A

BatchID: Q00VOCW242

PrepDate:

Analyst: DJK

Chlorobenzene	ND	5.0		µg/L	1	12/1/00
Chloroethane	ND	5.0		µg/L	1	12/1/00
Chloroform	ND	5.0		µg/L	1	12/1/00
Chloromethane	ND	5.0		µg/L	1	12/1/00
cis-1,2-Dichloroethene	ND	5.0		µg/L	1	12/1/00
Dibromochloromethane	ND	5.0		µg/L	1	12/1/00
Dibromomethane	ND	5.0		µg/L	1	12/1/00
Dichlorodifluoromethane	ND	5.0		µg/L	1	12/1/00
Ethylbenzene	ND	5.0		µg/L	1	12/1/00
Hexachlorobutadiene	ND	5.0		µg/L	1	12/1/00
Isopropylbenzene	ND	5.0		µg/L	1	12/1/00
m,p-Xylene	ND	5.0		µg/L	1	12/1/00
Methylene chloride	ND	5.0		µg/L	1	12/1/00
n-Butylbenzene	ND	5.0		µg/L	1	12/1/00
n-Propylbenzene	ND	5.0		µg/L	1	12/1/00
Naphthalene	ND	5.0		µg/L	1	12/1/00
o-Xylene	ND	5.0		µg/L	1	12/1/00
sec-Butylbenzene	ND	5.0		µg/L	1	12/1/00
Styrene	ND	5.0		µg/L	1	12/1/00
tert-Butylbenzene	ND	5.0		µg/L	1	12/1/00
Tetrachloroethene	ND	5.0		µg/L	1	12/1/00
Toluene	ND	5.0		µg/L	1	12/1/00
trans-1,2-Dichloroethene	ND	5.0		µg/L	1	12/1/00
Trichloroethene	ND	5.0		µg/L	1	12/1/00
Trichlorofluoromethane	ND	5.0		µg/L	1	12/1/00
Vinyl chloride	ND	5.0		µg/L	1	12/1/00

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-6

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 12:00:00 PM

Lab ID: 048159-003A

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_001201A

BatchID: Q00VOCW242

PrepDate:

Analyst: DJK

Di-isopropyl ether	ND	5.0		µg/L	1	12/1/00
Ethyl tert-butyl ether	ND	5.0		µg/L	1	12/1/00
MTBE	ND	5.0		µg/L	1	12/1/00
Tert-amyl methyl ether	ND	5.0		µg/L	1	12/1/00
Tert-Butanol	ND	200		µg/L	1	12/1/00

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_001201A

BatchID: Q00VOCW242

PrepDate:

Analyst: DJK

1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	1	12/1/00
1,1,1-Trichloroethane	ND	5.0		µg/L	1	12/1/00
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	12/1/00
1,1,2-Trichloroethane	ND	5.0		µg/L	1	12/1/00
1,1-Dichloroethane	ND	5.0		µg/L	1	12/1/00
1,1-Dichloroethene	ND	5.0		µg/L	1	12/1/00
1,1-Dichloropropene	ND	5.0		µg/L	1	12/1/00
1,2,3-Trichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,2,3-Trichloropropane	ND	5.0		µg/L	1	12/1/00
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,2,4-Trimethylbenzene	ND	5.0		µg/L	1	12/1/00
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	12/1/00
1,2-Dibromoethane	ND	5.0		µg/L	1	12/1/00
1,2-Dichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,2-Dichloroethane	ND	5.0		µg/L	1	12/1/00
1,2-Dichloropropane	ND	5.0		µg/L	1	12/1/00
1,3,5-Trimethylbenzene	ND	5.0		µg/L	1	12/1/00
1,3-Dichlorobenzene	ND	5.0		µg/L	1	12/1/00
1,3-Dichloropropane	ND	5.0		µg/L	1	12/1/00
1,4-Dichlorobenzene	ND	5.0		µg/L	1	12/1/00
2,2-Dichloropropane	ND	5.0		µg/L	1	12/1/00
2-Chlorotoluene	ND	5.0		µg/L	1	12/1/00
4-Chlorotoluene	ND	5.0		µg/L	1	12/1/00
4-Isopropyltoluene	ND	5.0		µg/L	1	12/1/00
Benzene	34	5.0		µg/L	1	12/1/00
Bromobenzene	ND	5.0		µg/L	1	12/1/00
Bromodichloromethane	ND	5.0		µg/L	1	12/1/00
Bromoform	ND	5.0		µg/L	1	12/1/00
Bromomethane	ND	5.0		µg/L	1	12/1/00
Carbon tetrachloride	ND	5.0		µg/L	1	12/1/00

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-6

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 12:00:00 PM

Lab ID: 048159-003A

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_001201A

BatchID: Q00VOCW242

PrepDate:

Analyst: DJK

Chlorobenzene	ND	5.0		µg/L	1	12/1/00
Chloroethane	ND	5.0		µg/L	1	12/1/00
Chloroform	ND	5.0		µg/L	1	12/1/00
Chloromethane	ND	5.0		µg/L	1	12/1/00
cis-1,2-Dichloroethene	ND	5.0		µg/L	1	12/1/00
Dibromochloromethane	ND	5.0		µg/L	1	12/1/00
Dibromomethane	ND	5.0		µg/L	1	12/1/00
Dichlorodifluoromethane	ND	5.0		µg/L	1	12/1/00
Ethylbenzene	ND	5.0		µg/L	1	12/1/00
Hexachlorobutadiene	ND	5.0		µg/L	1	12/1/00
Isopropylbenzene	ND	5.0		µg/L	1	12/1/00
m,p-Xylene	ND	5.0		µg/L	1	12/1/00
Methylene chloride	ND	5.0		µg/L	1	12/1/00
n-Butylbenzene	ND	5.0		µg/L	1	12/1/00
n-Propylbenzene	ND	5.0		µg/L	1	12/1/00
Naphthalene	ND	5.0		µg/L	1	12/1/00
o-Xylene	ND	5.0		µg/L	1	12/1/00
sec-Butylbenzene	ND	5.0		µg/L	1	12/1/00
Styrene	ND	5.0		µg/L	1	12/1/00
tert-Butylbenzene	ND	5.0		µg/L	1	12/1/00
Tetrachloroethene	ND	5.0		µg/L	1	12/1/00
Toluene	ND	5.0		µg/L	1	12/1/00
trans-1,2-Dichloroethene	ND	5.0		µg/L	1	12/1/00
Trichloroethene	ND	5.0		µg/L	1	12/1/00
Trichlorofluoromethane	ND	5.0		µg/L	1	12/1/00
Vinyl chloride	ND	5.0		µg/L	1	12/1/00

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored, Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental
 Lab Order: 048159
 Project: Thomas Short - S8225-06-103
 Lab ID: 048159-001B

Client Sample ID: MW-4
 Collection Date: 11/27/00 11:20:00 AM
 Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS		EPA 6010B				
RunID: ICP2_001129A	BatchID: 2148		PrepDate: 11/28/00		Analyst: EFR	
Antimony	ND	0.0050		mg/L	1	11/29/00
Arsenic	0.010	0.0050		mg/L	1	11/29/00
Barium	0.47	0.0010		mg/L	1	11/29/00
Beryllium	ND	0.0010		mg/L	1	11/29/00
Cadmium	ND	0.0030		mg/L	1	11/29/00
Chromium	0.0032	0.0030		mg/L	1	11/29/00
Cobalt	ND	0.0030		mg/L	1	11/29/00
Copper	0.010	0.0030		mg/L	1	11/29/00
Lead	0.0077	0.0050		mg/L	1	11/29/00
Molybdenum	0.0064	0.0050		mg/L	1	11/29/00
Nickel	0.030	0.0030		mg/L	1	11/29/00
Selenium	ND	0.0050		mg/L	1	11/29/00
Silver	0.020	0.0010		mg/L	1	11/29/00
Thallium	ND	0.0050		mg/L	1	11/29/00
Vanadium	0.0034	0.0030		mg/L	1	11/29/00
Zinc	0.070	0.010		mg/L	1	11/29/00

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out
 S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials:



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental
Lab Order: 048159
Project: Thomas Short - S8225-06-103
Lab ID: 048159-001B

Client Sample ID: MW-4
Collection Date: 11/27/00 11:20:00 AM
Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE		EPA 7470A				
RunID: AA1_001129A	BatchID: 2149			PrepDate: 11/28/00		Analyst: NS
Mercury	ND	0.0040		mg/L	2	11/29/00

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: 

2



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-5

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 11:45:00 AM

Lab ID: 048159-002B

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP METALS

EPA 6010B

RunID: ICP2_001129A

BatchID: 2148

PrepDate: 11/28/00

Analyst: EFR

Antimony	ND	0.0050		mg/L	1	11/29/00
Arsenic	0.030	0.0050		mg/L	1	11/29/00
Barium	1.2	0.0010		mg/L	1	11/29/00
Beryllium	ND	0.0010		mg/L	1	11/29/00
Cadmium	0.0061	0.0030		mg/L	1	11/29/00
Chromium	0.050	0.0030		mg/L	1	11/29/00
Cobalt	0.010	0.0030		mg/L	1	11/29/00
Copper	0.050	0.0030		mg/L	1	11/29/00
Lead	0.020	0.0050		mg/L	1	11/29/00
Molybdenum	0.010	0.0050		mg/L	1	11/29/00
Nickel	0.10	0.0030		mg/L	1	11/29/00
Selenium	ND	0.0050		mg/L	1	11/29/00
Silver	0.010	0.0010		mg/L	1	11/29/00
Thallium	ND	0.0050		mg/L	1	11/29/00
Vanadium	0.050	0.0030		mg/L	1	11/29/00
Zinc	0.10	0.010		mg/L	1	11/29/00

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored, Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-5

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 11:45:00 AM

Lab ID: 048159-002B

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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MERCURY BY COLD VAPOR TECHNIQUE

EPA 7470A

RunID: AA1_001129A

BatchID: 2149

PrepDate: 11/28/00

Analyst: NS

Mercury

ND

0.0040

mg/L

2

11/29/00

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored, Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental
Lab Order: 048159

Client Sample ID: MW-6

Project: Thomas Short - S8225-06-103
Lab ID: 048159-003B

Collection Date: 11/27/00 12:00:00 PM
Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP METALS

EPA 6010B

RunID: ICP2_001129A

BatchID: 2148

PrepDate: 11/28/00

Analyst: EFR

Antimony	ND	0.0050		mg/L	1	11/29/00
Arsenic	0.0091	0.0050		mg/L	1	11/29/00
Barium	0.20	0.0010		mg/L	1	11/29/00
Beryllium	ND	0.0010		mg/L	1	11/29/00
Cadmium	ND	0.0030		mg/L	1	11/29/00
Chromium	ND	0.0030		mg/L	1	11/29/00
Cobalt	0.0049	0.0030		mg/L	1	11/29/00
Copper	0.010	0.0030		mg/L	1	11/29/00
Lead	ND	0.0050		mg/L	1	11/29/00
Molybdenum	0.010	0.0050		mg/L	1	11/29/00
Nickel	0.040	0.0030		mg/L	1	11/29/00
Selenium	ND	0.0050		mg/L	1	11/29/00
Silver	0.010	0.0010		mg/L	1	11/29/00
Thallium	ND	0.0050		mg/L	1	11/29/00
Vanadium	0.0036	0.0030		mg/L	1	11/29/00
Zinc	0.050	0.010		mg/L	1	11/29/00

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 12/7/00

CLIENT: Geocon Environmental

Client Sample ID: MW-6

Lab Order: 048159

Project: Thomas Short - S8225-06-103

Collection Date: 11/27/00 12:00:00 PM

Lab ID: 048159-003B

Matrix: WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE		EPA 7470A				
RunID: AA1_001129A	BatchID: 2149			PrepDate: 11/28/00		Analyst: NS
Mercury	ND	0.0040		mg/L	2	11/29/00

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: 





Advanced Technology
Laboratories

Advanced Technology Laboratories

Date: 07-Dec-00

CLIENT: Geocon Environmental
Work Order: 048159
Project: Thomas Short - S8225-06-103

QC SUMMARY REPORT Method Blank

Sample ID: MB-2148 Batch ID: 2148 Test Name: DISSOLVED METALS BY ICP Units mg/L Analysis Date: 11/29/00 Prep Date: 11/28/00

MBLK SeqNo: 75088

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.0050									
Arsenic	ND	0.0050									J
Barium	ND	0.0010									
Beryllium	ND	0.0010									
Cadmium	ND	0.0030									
Chromium	ND	0.0030									
Cobalt	ND	0.0030									
Copper	ND	0.0030									
Lead	ND	0.0050									
Molybdenum	ND	0.0050									
Nickel	ND	0.0030									J
Selenium	ND	0.0050									
Silver	ND	0.0010									
Thallium	ND	0.0050									J
Vanadium	ND	0.0030									
Zinc	ND	0.010									

Sample ID: MB-2149 Batch ID: 2149 Test Name: MERCURY BY COLD VAPOR TECHNIQUE Units mg/L Analysis Date: 11/29/00 Prep Date: 11/28/00

MBLK SeqNo: 75132

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0020									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials:

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040



Advanced Technology
Laboratories

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Environmental
Work Order: 048159
Project: Thomas Short - S8225-06-103

QC SUMMARY REPORT
Method Blank

Sample ID: MB-2154 Batch ID: 2154 Test Name: DIESEL RANGE ORGANICS BY GC/FID Units mg/L Analysis Date: 11/30/00 Prep Date: 11/29/00

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	0.050									

Sample ID: 001201BLKW1 Batch ID: I008G20W214 Test Name: GASOLINE RANGE ORGANICS BY GC/FID Units mg/L Analysis Date: 12/1/00 Prep Date:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	0.20									

Sample ID: 001201BLKW1 Batch ID: I008G20W214 Test Name: VOLATILE ORGANIC COMPOUNDS BY GC/PID Units µg/L Analysis Date: 12/1/00 Prep Date:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	0.50									
MTBE	ND	0.50									
o-Xylene	ND	0.50									
Toluene	ND	0.50									

Sample ID: 001201BLKW1 Batch ID: Q00VOCW242 Test Name: VOLATILE ORGANIC COMPOUNDS BY GC/MS Units µg/L Analysis Date: 12/1/00 Prep Date:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Di-isopropyl ether	ND	5.0									
Ethyl tert-butyl ether	ND	5.0									
MTBE	ND	5.0									
Tert-amyl methyl ether	ND	5.0									
Tert-Butanol	ND	200									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored, Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials:



Advanced Technology
Laboratories

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Environmental
Work Order: 048159
Project: Thomas Short - S8225-06-103

QC SUMMARY REPORT

Method Blank

Sample ID: 001201BLKW1 Batch ID: Q00VOCW242 Test Name: VOLATILE ORGANIC COMPOUNDS BY GC/MS Units µg/L Analysis Date: 12/1/00 Prep Date:
MBLK SeqNo: 75161

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0									
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,1-Dichloropropene	ND	5.0									
1,2,3-Trichlorobenzene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2,4-Trichlorobenzene	ND	5.0									
1,2,4-Trimethylbenzene	ND	5.0									
1,2-Dibromo-3-chloropropane	ND	5.0									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,2-Dichloropropane	ND	5.0									
1,3,5-Trimethylbenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2,2-Dichloropropane	ND	5.0									
2-Chloroethyl vinyl ether	ND	5.0									
2-Chlorotoluene	ND	5.0									
4-Chlorotoluene	ND	5.0									
4-Isopropyltoluene	ND	5.0									
Benzene	ND	5.0									
Bromobenzene	ND	5.0									
Bromodichloromethane	ND	5.0									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials: DP



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Work Order: 048159
Project: Thomas Short - S8225-06-103

QC SUMMARY REPORT
Method Blank

Bromoform	ND	5.0
Bromomethane	ND	5.0
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	5.0
Chloroform	ND	5.0
Chloromethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Dibromochloromethane	ND	5.0
Dibromomethane	ND	5.0
Dichlorodifluoromethane	ND	5.0
Ethylbenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Isopropylbenzene	ND	5.0
m,p-Xylene	ND	5.0
Methylene chloride	ND	5.0
MTBE	ND	5.0
n-Butylbenzene	ND	5.0
n-Propylbenzene	ND	5.0
Naphthalene	ND	5.0
o-Xylene	ND	5.0
sec-Butylbenzene	ND	5.0
Styrene	ND	5.0
tert-Butylbenzene	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	5.0

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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DO - Surrogate Diluted Out

Initials: *W*



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Date: 07-Dec-00

CLIENT: Geocon Environmental
Work Order: 048159
Project: Thomas Short - S8225-06-103

QC SUMMARY REPORT Sample Duplicate

Sample ID: 048159-003B Batch ID: 2148 Test Name: DISSOLVED METALS BY ICP Units mg/L Analysis Date: 11/29/00 Prep Date: 11/28/00

DUP SeqNo: 75081

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.0050	0	0	0	0	0	0			
Arsenic	0.01	0.0050	0	0	0	0	0	0			
Barium	0.23	0.0010	0	0	0	0	0	0			
Beryllium	0.0007	0.0010	0	0	0	0	0	0			J
Cadmium	0.00103	0.0030	0	0	0	0	0	0			J
Chromium	0.00392	0.0030	0	0	0	0	0	0			
Cobalt	0.00578	0.0030	0	0	0	0	0	0			
Copper	0.02	0.0030	0	0	0	0	0	0			
Lead	ND	0.0050	0	0	0	0	0	0			
Molybdenum	0.01	0.0050	0	0	0	0	0	0			
Nickel	0.05	0.0030	0	0	0	0	0	0			
Selenium	ND	0.0050	0	0	0	0	0	0			
Silver	0.00878	0.0010	0	0	0	0	0	0			
Thallium	0.00413	0.0050	0	0	0	0	0	0			J
Vanadium	0.00654	0.0030	0	0	0	0	0	0			
Zinc	0.03	0.010	0	0	0	0	0	0			

Sample ID: 048159-003B Batch ID: 2149 Test Name: MERCURY BY COLD VAPOR TECHNIQUE Units mg/L Analysis Date: 11/29/00 Prep Date: 11/28/00

DUP SeqNo: 75136

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0040	0	0	0	0	0	0	0	30	

Qualifiers: ND - Not Detected at the Reporting Limit
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M - Not Monitored. Highly Reactive
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DO - Surrogate Diluted Out

Initials:



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QC SUMMARY REPORT

Sample Duplicate

Sample ID: **048159-002B** Batch ID: **2154** Test Name: **DIESEL RANGE ORGANICS BY GC/FID** Units **mg/L** Analysis Date: **11/30/00** Prep Date: **11/29/00**

DUP SeqNo: **75280**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	0.5164	0.050	0	0	0	0	0	0.4469	14	30	

Sample ID: **048159-003A** Batch ID: **I008G20W214** Test Name: **GASOLINE RANGE ORGANICS BY GC/FID** Units **mg/L** Analysis Date: **12/1/00** Prep Date:

DUP SeqNo: **75538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.42	0.050	0	0	0	0	0	0.323	26	30	

Sample ID: **048159-003A** Batch ID: **I008G20W214** Test Name: **VOLATILE ORGANIC COMPOUNDS BY GC/PID** Units **µg/L** Analysis Date: **12/1/00** Prep Date:

DUP SeqNo: **75519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	32.76	0.50	0	0	0	0	0	15.69	70	30	R
Ethylbenzene	2.745	0.50	0	0	0	0	0	1.078	87	30	R
m,p-Xylene	1.052	0.50	0	0	0	0	0	0.876	18	30	
MTBE	2.026	0.50	0	0	0	0	0	1.835	10	30	
o-Xylene	0.507	0.50	0	0	0	0	0	0.254	66	30	R
Toluene	0.893	0.50	0	0	0	0	0	0.512	54	30	R

Sample ID: **048159-003A** Batch ID: **Q00VOCW242** Test Name: **VOLATILE ORGANIC COMPOUNDS BY GC/MS** Units **µg/L** Analysis Date: **12/1/00** Prep Date:

DUP SeqNo: **75179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Di-isopropyl ether	ND	5.0	0	0	0	0	0	0	0	30	
Ethyl tert-butyl ether	ND	5.0	0	0	0	0	0	0	0	30	
MTBE	ND	5.0	0	0	0	0	0	0	0	30	
Tert-amyl methyl ether	ND	5.0	0	0	0	0	0	0	0	30	
Tert-Butanol	ND	200	0	0	0	0	0	0	0	30	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

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QC SUMMARY REPORT
Sample Duplicate

Sample ID: 048169-003A Batch ID: Q00VOCW242 Test Name: VOLATILE ORGANIC COMPOUNDS BY GC/MS Units µg/L Analysis Date: 12/1/00 Prep Date:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	SeqNo:
												75167
1,1,1,2-Tetrachloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1,1-Trichloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1,2,2-Tetrachloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1,2-Trichloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1-Dichloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1-Dichloroethene	ND	5.0	0	0	0	0	0	0	0	30		
1,1-Dichloropropene	ND	5.0	0	0	0	0	0	0	0	30		
1,2,3-Trichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,2,3-Trichloropropane	ND	5.0	0	0	0	0	0	0	0	30		
1,2,4-Trichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,2,4-Trimethylbenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dibromo-3-chloropropane	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dibromoethane	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dichloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dichloropropane	ND	5.0	0	0	0	0	0	0	0	30		
1,3,5-Trimethylbenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,3-Dichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,3-Dichloropropane	ND	5.0	0	0	0	0	0	0	0	30		
1,4-Dichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
2,2-Dichloropropane	ND	5.0	0	0	0	0	0	0	0	30		
2-Chlorotoluene	ND	5.0	0	0	0	0	0	0	0	30		
4-Chlorotoluene	ND	5.0	0	0	0	0	0	0	0	30		
4-Isopropyltoluene	ND	5.0	0	0	0	0	0	0	0	30		
Benzene	33.24	5.0	0	0	0	0	0	34.31	3	30		
Bromobenzene	ND	5.0	0	0	0	0	0	0	0	30		
Bromodichloromethane	ND	5.0	0	0	0	0	0	0	0	30		
Bromoform	ND	5.0	0	0	0	0	0	0	0	30		

Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials: *CD*



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Work Order: 048159
Project: Thomas Short - S8225-06-103

QC SUMMARY REPORT
Sample Duplicate

Bromomethane	ND	5.0	0	0	0	0	0	0	0	0	30
Carbon tetrachloride	ND	5.0	0	0	0	0	0	0	0	0	30
Chlorobenzene	ND	5.0	0	0	0	0	0	0	0	0	30
Chloroethane	ND	5.0	0	0	0	0	0	0	0	0	30
Chloroform	ND	5.0	0	0	0	0	0	0	0	0	30
Chloromethane	ND	5.0	0	0	0	0	0	0	0	0	30
cis-1,2-Dichloroethene	ND	5.0	0	0	0	0	0	0	0	0	30
Dibromochloromethane	ND	5.0	0	0	0	0	0	0	0	0	30
Dibromomethane	ND	5.0	0	0	0	0	0	0	0	0	30
Dichlorodifluoromethane	ND	5.0	0	0	0	0	0	0	0	0	30
Ethylbenzene	ND	5.0	0	0	0	0	0	0	0	0	30
Hexachlorobutadiene	ND	5.0	0	0	0	0	0	0	0	0	30
Isopropylbenzene	ND	5.0	0	0	0	0	0	0	0	0	30
m,p-Xylene	ND	5.0	0	0	0	0	0	0	0	0	30
Methylene chloride	ND	5.0	0	0	0	0	0	0	0	0	30
n-Butylbenzene	ND	5.0	0	0	0	0	0	0	0	0	30
n-Propylbenzene	ND	5.0	0	0	0	0	0	0	0	0	30
Naphthalene	ND	5.0	0	0	0	0	0	0	0	0	30
o-Xylene	ND	5.0	0	0	0	0	0	0	0	0	30
sec-Butylbenzene	ND	5.0	0	0	0	0	0	0	0	0	30
Styrene	ND	5.0	0	0	0	0	0	0	0	0	30
tert-Butylbenzene	ND	5.0	0	0	0	0	0	0	0	0	30
Tetrachloroethene	ND	5.0	0	0	0	0	0	0	0	0	30
Toluene	ND	5.0	0	0	0	0	0	0	0	0	30
trans-1,2-Dichloroethene	ND	5.0	0	0	0	0	0	0	0	0	30
Trichloroethene	ND	5.0	0	0	0	0	0	0	0	0	30
Trichlorofluoromethane	ND	5.0	0	0	0	0	0	0	0	0	30
Vinyl chloride	ND	5.0	0	0	0	0	0	0	0	0	30

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored, Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials:



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Date: 07-Dec-00

CLIENT: Geocon Environmental
Work Order: 048159
Project: Thomas Short - S8225-06-103

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 048159-003B Batch ID: 2148 Test Name: DISSOLVED METALS BY ICP Units mg/L Analysis Date: 11/29/00 Prep Date: 11/28/00

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 75083		RPD Ref Val	%RPD	RPDLimit	Qual
						LowLimit	HighLimit				
Antimony	4.92	0.0050	5	0	98	69	116	0			
Arsenic	4.85	0.0050	5	0.00906	97	67	114	0			
Barium	4.87	0.0010	5	0.2	93	63	125	0			
Beryllium	4.46	0.0010	5	0.00084	89	60	117	0			
Cadmium	4.55	0.0030	5	0.00111	91	63	123	0			
Chromium	4.74	0.0030	5	0.00109	95	68	118	0			
Cobalt	4.73	0.0030	5	0.00492	95	68	118	0			
Copper	5.24	0.0030	5	0.01	105	72	123	0			
Lead	4.92	0.0050	5	0.00355	98	66	118	0			
Molybdenum	4.86	0.0050	5	0.01	97	65	111	0			
Nickel	4.59	0.0030	5	0.04	91	64	121	0			
Selenium	4.74	0.0050	5	0	95	62	109	0			
Silver	4.22	0.0010	5	0.01	84	71	137	0			
Thallium	5.02	0.0050	5	0	100	67	122	0			
Vanadium	4.78	0.0030	5	0.0036	96	69	118	0			
Zinc	4.78	0.010	5	0.05	95	65	112	0			

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Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

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CLIENT: Geocon Environmental
Work Order: 048159
Project: Thomas Short - S8225-06-103

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID: 048159-003B Batch ID: 2148 Test Name: DISSOLVED METALS BY ICP Units mg/L Analysis Date: 11/29/00 Prep Date: 11/28/00

MSD											
SeqNo: 75084											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	5.04	0.0050	5	0	101	69	116	4.92	2	20	
Arsenic	4.97	0.0050	5	0.00906	99	67	114	4.85	2	20	
Barium	4.89	0.0010	5	0.2	94	63	125	4.87	0	20	
Beryllium	4.53	0.0010	5	0.00084	91	60	117	4.46	2	20	
Cadmium	4.62	0.0030	5	0.00111	92	63	123	4.55	2	20	
Chromium	4.84	0.0030	5	0.00109	97	68	118	4.74	2	20	
Cobalt	4.85	0.0030	5	0.00492	97	68	118	4.73	3	20	
Copper	5.33	0.0030	5	0.01	106	72	123	5.24	2	20	
Lead	5.03	0.0050	5	0.00355	101	66	118	4.92	2	20	
Molybdenum	5	0.0050	5	0.01	100	65	111	4.86	3	20	
Nickel	4.68	0.0030	5	0.04	93	64	121	4.59	2	20	
Selenium	4.86	0.0050	5	0	97	62	109	4.74	3	20	
Silver	4.31	0.0010	5	0.01	86	71	137	4.22	2	20	
Thallium	5.11	0.0050	5	0	102	67	122	5.02	2	20	
Vanadium	4.89	0.0030	5	0.0036	98	69	118	4.78	2	20	
Zinc	4.88	0.010	5	0.05	97	65	112	4.78	2	20	

Sample ID: 048159-003B Batch ID: 2149 Test Name: MERCURY BY COLD VAPOR TECHNIQUE Units mg/L Analysis Date: 11/29/00 Prep Date: 11/28/00

MS											
SeqNo: 75137											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.01634	0.0040	0.02	0	82	69	144	0			

Sample ID: 048159-003B Batch ID: 2149 Test Name: MERCURY BY COLD VAPOR TECHNIQUE Units mg/L Analysis Date: 11/29/00 Prep Date: 11/28/00

MSD											
SeqNo: 75138											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.01769	0.0040	0.02	0	88	69	144	0.01634	8	20	

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank DO - Surrogate Diluted Out
 J - Analyte detected below quantitation limits M - Not Monitored, Highly Reactive
 R - RPD outside accepted recovery limits S - Spike/Surrogate outside of limits due to matrix interference

Initials:



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Project: Thomas Short - S8225-06-103

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID: MB-2154 Batch ID: 2154 Test Name: DIESEL RANGE ORGANICS BY GC/FID Units mg/L Analysis Date: 11/30/00 Prep Date: 11/29/00
MS SeqNo: 75275

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1.007	0.050	1	0	101	50	150	0			

Sample ID: MB-2154 Batch ID: 2154 Test Name: DIESEL RANGE ORGANICS BY GC/FID Units mg/L Analysis Date: 11/30/00 Prep Date: 11/29/00
MSD SeqNo: 75276

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1.027	0.050	1	0	103	50	150	1.007	2	40	

Sample ID: 001201BLKW1 Batch ID: I008G20W214 Test Name: GASOLINE RANGE ORGANICS BY GC/FID Units mg/L Analysis Date: 12/1/00 Prep Date:
MS SeqNo: 75558

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.914	0.20	1	0	91	50	119	0			

Sample ID: 001201BLKW1 Batch ID: I008G20W214 Test Name: GASOLINE RANGE ORGANICS BY GC/FID Units mg/L Analysis Date: 12/1/00 Prep Date:
MSD SeqNo: 75559

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.885	0.20	1	0	89	50	119	0.914	3	20	

Sample ID: 001201BLKW1 Batch ID: I008G20W214 Test Name: VOLATILE ORGANIC COMPOUNDS BY GC/PID Units µg/L Analysis Date: 12/1/00 Prep Date:
MS SeqNo: 75520

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	6.926	0.50	5.5	0	126	60	136	0			
Toluene	36.64	0.50	30	0	122	61	128	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored, Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

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QC SUMMARY REPORT

Sample Matrix Spike Duplicate

Sample ID: 001201BLKW1	Batch ID: I008G20W214	Test Name: VOLATILE ORGANIC COMPOUNDS BY GC/PID				Units µg/L	Analysis Date: 12/1/00	Prep Date:			
MSD						SeqNo: 75521					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	6.173	0.50	5.5	0	112	60	136	6.926	12	18	
Toluene	31.2	0.50	30	0	104	61	128	36.64	16	22	

Sample ID: 001201BLKW1	Batch ID: Q00VOCW242	Test Name: VOLATILE ORGANIC COMPOUNDS BY GC/MS				Units µg/L	Analysis Date: 12/1/00	Prep Date:			
MS						SeqNo: 75160					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	99.67	5.0	100	0	100	71	120	0			
Benzene	109.8	5.0	100	0	110	82	122	0			
Chlorobenzene	106.8	5.0	100	0	107	81	121	0			
Toluene	110	5.0	100	0	110	81	125	0			
Trichloroethene	105.4	5.0	100	0	105	80	123	0			

Sample ID: 001201BLKW1	Batch ID: Q00VOCW242	Test Name: VOLATILE ORGANIC COMPOUNDS BY GC/MS				Units µg/L	Analysis Date: 12/2/00	Prep Date:			
MSD						SeqNo: 75171					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	82.19	5.0	100	0	82	71	120	99.67	19	21	
Benzene	110.7	5.0	100	0	111	82	122	109.8	1	19	
Chlorobenzene	104.5	5.0	100	0	104	81	121	106.8	2	18	
Toluene	110.6	5.0	100	0	111	81	125	110	1	20	
Trichloroethene	106.9	5.0	100	0	107	80	123	105.4	1	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials:

April 09, 2001

Matt Hanko
Geocon Environmental
5673 W. Las Positas Blvd., Ste 205
Pleasanton, CA 94588
TEL: (925) 469-9750
FAX (925) 469-9749

ELAP No: 1838

RE: Thomas Short - E

Work Order No.: 050405

Attention: Matt Hanko

Enclosed are the results for sample(s) received on April 02, 2001 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,



Edgar Caballero
Laboratory Director

This cover letter and a case narrative are an integral part of this analytical report.



CHAIN OF CUSTODY RECORD



**Advanced Technology
Laboratories**

1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____
Logged By: _____ Date: _____ Time: _____

Method of Transport
Walk-in
Courier
UPS
FED. EXP.
ATL

Sample Condition Upon Receipt

1. CHILLED Y N 4. SEALED Y N
2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
3. CONTAINER INTACT Y N 6. PRESERVED Y N

Client: Garcia (psuh) Address: 5673 W Las Positas Blvd #205 TEL: (925) 469-9750
Attn: Matt Hanko City: Pleasanton State: CA Zip Code: 94588 FAX: (925) 469-9749

Project Name: Thomas Short Project #: E Sampler: Travis Mills (Printed Name) JM (Signature)
Relinquished by: (Signature and Printed Name) JM Date: 3/ Time: 1700 Received by: (Signature and Printed Name) GSO Date: 3/ Time: 1700
Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____ Received by: (Signature and Printed Name) RM Date: 4-2-01 Time: _____
Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____ Received by: (Signature and Printed Name) _____ Date: _____ Time: _____

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Travis Mills 3/29/01
Print Name Date
JM
Signature

Send Report To:
Attn: _____
Co: _____
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: _____
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments:
Filter metals sample & preserve
MTBE 8020

Unless otherwise requested, all samples will be disposed 45 days after receipt.
Sample Archive/Disposal:
 Laboratory Standard
 Other
 Return To: _____
* \$10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested	CIRCLE APPROPRIATE MATRIX										PRESERVATION	REMARKS							
	8011 / 8062 (Pesticides/PCB-GC)	8260 (Volatile-GCMS)	825 / 8270 (BNA-GCMS)	Metals Total (CFC-8010 / 7000)	8015M TPH/BTEX (COMBINA-TION)	8015M TPH/BTEX (Diluted-GC)	PCBs / VOCs	THC / ZC	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID			WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	#
<u>PCBs / VOCs</u>						<u>X</u>	<u>X</u>												
<u>THC / ZC</u>																			
<u>8015M TPH/BTEX (COMBINA-TION)</u>																			
<u>8015M TPH/BTEX (Diluted-GC)</u>																			
<u>Metals Total (CFC-8010 / 7000)</u>																			
<u>825 / 8270 (BNA-GCMS)</u>																			
<u>8260 (Volatile-GCMS)</u>																			
<u>8011 / 8062 (Pesticides/PCB-GC)</u>																			

I T E M	LAB USE ONLY:		Sample Description			
	Batch #:	Lab No.	Sample I.D.	Date	Time	
		<u>50405-8010</u>	<u>MW-4</u>	<u>3/29</u>	<u>1040</u>	
		<u>1B</u>	<u>MW-4</u>			
		<u>1C</u>	<u>MW-4</u>			
		<u>2A</u>	<u>MW-5</u>		<u>1055</u>	
		<u>2B</u>			<u>1055</u>	
		<u>2C</u>			<u>1055</u>	
		<u>803A</u>	<u>MW-6</u>		<u>1110</u>	
		<u>2B</u>				
		<u>3C</u>				
		<u>4A</u>	<u>Trip</u>		<u>1000</u>	

• TAT starts 8 a.m. following day if samples received after 5 p.m.
TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays
Preservatives: H=HCl N=HNO₃ S=H₂SO₄ C=4°C Z=Zn(Ac)₂ O=NaOH T=Na₂S₂O₈
Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Teclar G=Glass P=Plastic M=Metal

CLIENT: Geocon Environmental
Project: Thomas Short - E
Lab Order: 050405

CASE NARRATIVE

Samples 050405-001B, 050405-002B and 050405-003B contain hydrocarbons that does not match the Diesel pattern. However, quantitation is based on the Diesel standard.



Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
 Lab Order: 050405
 Project: Thomas Short - E
 Lab ID: 050405-001A

Client Sample ID: MW-4
 Collection Date: 3/29/01 10:40:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID		EPA 8015B(M)			Analyst: JPC	
RunID: GC6_010405A	BatchID: I018G20W056					PrepDate:
GRO	8.1	0.20		mg/L	1	4/5/01
VOLATILE ORGANIC COMPOUNDS BY GC/PID		EPA 8020A			Analyst: JPC	
RunID: GC6_010405A	BatchID: I018G20W056					PrepDate:
Benzene	51	0.50		µg/L	1	4/5/01
Ethylbenzene	160	0.50		µg/L	1	4/5/01
m,p-Xylene	40	0.50		µg/L	1	4/5/01
MTBE	10	0.50		µg/L	1	4/5/01
o-Xylene	4.5	0.50		µg/L	1	4/5/01
Toluene	23	0.50		µg/L	1	4/5/01
VOLATILE ORGANIC COMPOUNDS BY GC/MS		EPA 8260B			Analyst: DJK	
RunID: MS2_010404A	BatchID: Q01VOCW074					PrepDate:
Di-isopropyl ether	ND	5.0		µg/L	1	4/4/01
Ethyl tert-butyl ether	ND	5.0		µg/L	1	4/4/01
MTBE	ND	5.0		µg/L	1	4/4/01
Tert-amyl methyl ether	ND	5.0		µg/L	1	4/4/01
Tert-Butanol	ND	200		µg/L	1	4/4/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 

Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
Lab Order: 050405
Project: Thomas Short - E
Lab ID: 050405-001A

Client Sample ID: MW-4
Collection Date: 3/29/01 10:40:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS			EPA 8260B		Analyst: DJK	
RunID: MS2_010404A	BatchID: Q01VOCW074		PrepDate:			
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	1	4/4/01
1,1,1-Trichloroethane	ND	5.0		µg/L	1	4/4/01
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	4/4/01
1,1,2-Trichloroethane	ND	5.0		µg/L	1	4/4/01
1,1-Dichloroethane	ND	5.0		µg/L	1	4/4/01
1,1-Dichloroethene	ND	5.0		µg/L	1	4/4/01
1,1-Dichloropropene	ND	5.0		µg/L	1	4/4/01
1,2,3-Trichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,2,3-Trichloropropane	ND	5.0		µg/L	1	4/4/01
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,2,4-Trimethylbenzene	ND	5.0		µg/L	1	4/4/01
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	4/4/01
1,2-Dibromoethane	ND	5.0		µg/L	1	4/4/01
1,2-Dichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,2-Dichloroethane	ND	5.0		µg/L	1	4/4/01
1,2-Dichloropropane	ND	5.0		µg/L	1	4/4/01
1,3,5-Trimethylbenzene	7.7	5.0		µg/L	1	4/4/01
1,3-Dichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,3-Dichloropropane	ND	5.0		µg/L	1	4/4/01
1,4-Dichlorobenzene	ND	5.0		µg/L	1	4/4/01
2,2-Dichloropropane	ND	5.0		µg/L	1	4/4/01
2-Chlorotoluene	ND	5.0		µg/L	1	4/4/01
4-Chlorotoluene	ND	5.0		µg/L	1	4/4/01
4-Isopropyltoluene	8.4	5.0		µg/L	1	4/4/01
Benzene	67	5.0		µg/L	1	4/4/01
Bromobenzene	ND	5.0		µg/L	1	4/4/01
Bromodichloromethane	ND	5.0		µg/L	1	4/4/01
Bromoform	ND	5.0		µg/L	1	4/4/01
Bromomethane	ND	5.0		µg/L	1	4/4/01
Carbon tetrachloride	ND	5.0		µg/L	1	4/4/01
Chlorobenzene	ND	5.0		µg/L	1	4/4/01
Chloroethane	ND	5.0		µg/L	1	4/4/01
Chloroform	ND	5.0		µg/L	1	4/4/01
Chloromethane	ND	5.0		µg/L	1	4/4/01
cis-1,2-Dichloroethene	ND	5.0		µg/L	1	4/4/01
Dibromochloromethane	ND	5.0		µg/L	1	4/4/01
Dibromomethane	ND	5.0		µg/L	1	4/4/01
Dichlorodifluoromethane	ND	5.0		µg/L	1	4/4/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
 Lab Order: 050405
 Project: Thomas Short - E
 Lab ID: 050405-001A

Client Sample ID: MW-4
 Collection Date: 3/29/01 10:40:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS			EPA 8260B		Analyst: DJK	
RunID: MS2_010404A	BatchID: Q01VOCW074		PrepDate:			
Ethylbenzene	190	5.0		µg/L	1	4/4/01
Hexachlorobutadiene	ND	5.0		µg/L	1	4/4/01
Isopropylbenzene	180	5.0		µg/L	1	4/4/01
m,p-Xylene	41	5.0		µg/L	1	4/4/01
Methylene chloride	ND	5.0		µg/L	1	4/4/01
n-Butylbenzene	26	5.0		µg/L	1	4/4/01
n-Propylbenzene	280	5.0		µg/L	1	4/4/01
Naphthalene	45	5.0		µg/L	1	4/4/01
o-Xylene	ND	5.0		µg/L	1	4/4/01
sec-Butylbenzene	12	5.0		µg/L	1	4/4/01
Styrene	ND	5.0		µg/L	1	4/4/01
tert-Butylbenzene	21	5.0		µg/L	1	4/4/01
Tetrachloroethene	ND	5.0		µg/L	1	4/4/01
Toluene	25	5.0		µg/L	1	4/4/01
trans-1,2-Dichloroethene	ND	5.0		µg/L	1	4/4/01
Trichloroethene	ND	5.0		µg/L	1	4/4/01
Trichlorofluoromethane	ND	5.0		µg/L	1	4/4/01
Vinyl chloride	ND	5.0		µg/L	1	4/4/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
Lab Order: 050405
Project: Thomas Short - E
Lab ID: 050405-001B

Client Sample ID: MW-4
Collection Date: 3/29/01 10:40:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID		EPA 8015B(M)			Analyst: AP	
RunID: GC7_010405B	BatchID: 3666	PrepDate: 4/4/01				
Diesel	0.61	0.050		mg/L	1	4/5/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
 Lab Order: 050405
 Project: Thomas Short - E
 Lab ID: 050405-001C

Client Sample ID: MW-4
 Collection Date: 3/29/01 10:40:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP			EPA 6010B		Analyst: EFR	
RunID: ICP2_010405C	BatchID: 3635					PrepDate: 4/4/01
Antimony	ND	0.0050		mg/L	1	4/5/01
Arsenic	0.0094	0.0050		mg/L	1	4/5/01
Barium	0.33	0.0010		mg/L	1	4/5/01
Beryllium	ND	0.0010		mg/L	1	4/5/01
Cadmium	ND	0.0030		mg/L	1	4/5/01
Chromium	ND	0.0030		mg/L	1	4/5/01
Cobalt	ND	0.0030		mg/L	1	4/5/01
Copper	0.010	0.0030		mg/L	1	4/5/01
Lead	ND	0.0050		mg/L	1	4/5/01
Molybdenum	0.0060	0.0050		mg/L	1	4/5/01
Nickel	0.0056	0.0030		mg/L	1	4/5/01
Selenium	0.0058	0.0050		mg/L	1	4/5/01
Silver	0.010	0.0010		mg/L	1	4/5/01
Thallium	ND	0.0050		mg/L	1	4/5/01
Vanadium	ND	0.0030		mg/L	1	4/5/01
Zinc	0.020	0.010		mg/L	1	4/5/01
MERCURY BY COLD VAPOR TECHNIQUE			EPA 7470A		Analyst: NS	
RunID: AA1_010405C	BatchID: 3679					PrepDate: 4/5/01
Mercury	ND	0.0040		mg/L	2	4/5/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

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 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 4/9/01

CLIENT: Geocon Environmental
Lab Order: 050405
Project: Thomas Short - E
Lab ID: 050405-002A

Client Sample ID: MW-5
Collection Date: 3/29/01 10:55:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID				EPA 8015B(M)		Analyst: JPC
RunID: GC6_010405A	BatchID: I018G20W056					PrepDate:
GRO	2.7	0.20		mg/L	1	4/5/01
VOLATILE ORGANIC COMPOUNDS BY GC/PID				EPA 8020A		Analyst: JPC
RunID: GC6_010405A	BatchID: I018G20W056					PrepDate:
Benzene	35	0.50		µg/L	1	4/5/01
Ethylbenzene	3.5	0.50		µg/L	1	4/5/01
m,p-Xylene	1.9	0.50		µg/L	1	4/5/01
MTBE	ND	0.50		µg/L	1	4/5/01
o-Xylene	1.3	0.50		µg/L	1	4/5/01
Toluene	1.1	0.50		µg/L	1	4/5/01
VOLATILE ORGANIC COMPOUNDS BY GC/MS				EPA 8260B		Analyst: DJK
RunID: MS2_010404A	BatchID: Q01VOCW074					PrepDate:
Di-isopropyl ether	ND	5.0		µg/L	1	4/4/01
Ethyl tert-butyl ether	ND	5.0		µg/L	1	4/4/01
MTBE	ND	5.0		µg/L	1	4/4/01
Tert-amyl methyl ether	ND	5.0		µg/L	1	4/4/01
Tert-Butanol	ND	200		µg/L	1	4/4/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 

Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
Lab Order: 050405
Project: Thomas Short - E
Lab ID: 050405-002A

Client Sample ID: MW-5
Collection Date: 3/29/01 10:55:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS			EPA 8260B		Analyst: DJK	
RunID: MS2_010404A	BatchID: Q01VOCW074		PrepDate:			
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	1	4/4/01
1,1,1-Trichloroethane	ND	5.0		µg/L	1	4/4/01
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	4/4/01
1,1,2-Trichloroethane	ND	5.0		µg/L	1	4/4/01
1,1-Dichloroethane	ND	5.0		µg/L	1	4/4/01
1,1-Dichloroethene	ND	5.0		µg/L	1	4/4/01
1,1-Dichloropropene	ND	5.0		µg/L	1	4/4/01
1,2,3-Trichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,2,3-Trichloropropane	ND	5.0		µg/L	1	4/4/01
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,2,4-Trimethylbenzene	ND	5.0		µg/L	1	4/4/01
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	4/4/01
1,2-Dibromoethane	ND	5.0		µg/L	1	4/4/01
1,2-Dichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,2-Dichloroethane	ND	5.0		µg/L	1	4/4/01
1,2-Dichloropropane	ND	5.0		µg/L	1	4/4/01
1,3,5-Trimethylbenzene	ND	5.0		µg/L	1	4/4/01
1,3-Dichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,3-Dichloropropane	ND	5.0		µg/L	1	4/4/01
1,4-Dichlorobenzene	ND	5.0		µg/L	1	4/4/01
2,2-Dichloropropane	ND	5.0		µg/L	1	4/4/01
2-Chlorotoluene	ND	5.0		µg/L	1	4/4/01
4-Chlorotoluene	ND	5.0		µg/L	1	4/4/01
4-Isopropyltoluene	ND	5.0		µg/L	1	4/4/01
Benzene	50	5.0		µg/L	1	4/4/01
Bromobenzene	ND	5.0		µg/L	1	4/4/01
Bromodichloromethane	ND	5.0		µg/L	1	4/4/01
Bromoform	ND	5.0		µg/L	1	4/4/01
Bromomethane	ND	5.0		µg/L	1	4/4/01
Carbon tetrachloride	ND	5.0		µg/L	1	4/4/01
Chlorobenzene	ND	5.0		µg/L	1	4/4/01
Chloroethane	ND	5.0		µg/L	1	4/4/01
Chloroform	ND	5.0		µg/L	1	4/4/01
Chloromethane	ND	5.0		µg/L	1	4/4/01
cis-1,2-Dichloroethene	ND	5.0		µg/L	1	4/4/01
Dibromochloromethane	ND	5.0		µg/L	1	4/4/01
Dibromomethane	ND	5.0		µg/L	1	4/4/01
Dichlorodifluoromethane	ND	5.0		µg/L	1	4/4/01

Qualifiers: ND - Not Detected at the Reporting Limit
 I - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
 Lab Order: 050405
 Project: Thomas Short - E
 Lab ID: 050405-002A

Client Sample ID: MW-5
 Collection Date: 3/29/01 10:55:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS			EPA 8260B		Analyst: DJK	
RunID: MS2_010404A	BatchID: Q01VOCW074		PrepDate:			
Ethylbenzene	ND	5.0		µg/L	1	4/4/01
Hexachlorobutadiene	ND	5.0		µg/L	1	4/4/01
Isopropylbenzene	7.1	5.0		µg/L	1	4/4/01
m,p-Xylene	ND	5.0		µg/L	1	4/4/01
Methylene chloride	ND	5.0		µg/L	1	4/4/01
n-Butylbenzene	ND	5.0		µg/L	1	4/4/01
n-Propylbenzene	11	5.0		µg/L	1	4/4/01
Naphthalene	15	5.0		µg/L	1	4/4/01
o-Xylene	ND	5.0		µg/L	1	4/4/01
sec-Butylbenzene	ND	5.0		µg/L	1	4/4/01
Styrene	ND	5.0		µg/L	1	4/4/01
tert-Butylbenzene	14	5.0		µg/L	1	4/4/01
Tetrachloroethene	ND	5.0		µg/L	1	4/4/01
Toluene	ND	5.0		µg/L	1	4/4/01
trans-1,2-Dichloroethene	ND	5.0		µg/L	1	4/4/01
Trichloroethene	ND	5.0		µg/L	1	4/4/01
Trichlorofluoromethane	ND	5.0		µg/L	1	4/4/01
Vinyl chloride	ND	5.0		µg/L	1	4/4/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials:  9



Advanced Technology Laboratories

Print Date: 4/9/01

CLIENT: Geocon Environmental
 Lab Order: 050405
 Project: Thomas Short - E
 Lab ID: 050405-002B

Client Sample ID: MW-5
 Collection Date: 3/29/01 10:55:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID		EPA 8015B(M)			Analyst: AP	
RunID: GC7_010405B	BatchID: 3666					PrepDate: 4/4/01
Diesel	0.96	0.050		mg/L	1	4/5/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials:  10



Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
Lab Order: 050405
Project: Thomas Short - E
Lab ID: 050405-002C

Client Sample ID: MW-5
Collection Date: 3/29/01 10:55:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP			EPA 6010B		Analyst: EFR	
RunID: ICP2_010405C	BatchID: 3635		PrepDate: 4/4/01			
Antimony	ND	0.0050		mg/L	1	4/5/01
Arsenic	0.010	0.0050		mg/L	1	4/5/01
Barium	0.20	0.0010		mg/L	1	4/5/01
Beryllium	ND	0.0010		mg/L	1	4/5/01
Cadmium	ND	0.0030		mg/L	1	4/5/01
Chromium	ND	0.0030		mg/L	1	4/5/01
Cobalt	ND	0.0030		mg/L	1	4/5/01
Copper	0.010	0.0030		mg/L	1	4/5/01
Lead	ND	0.0050		mg/L	1	4/5/01
Molybdenum	ND	0.0050		mg/L	1	4/5/01
Nickel	0.0062	0.0030		mg/L	1	4/5/01
Selenium	ND	0.0050		mg/L	1	4/5/01
Silver	0.0013	0.0010		mg/L	1	4/5/01
Thallium	ND	0.0050		mg/L	1	4/5/01
Vanadium	ND	0.0030		mg/L	1	4/5/01
Zinc	0.030	0.010		mg/L	1	4/5/01
MERCURY BY COLD VAPOR TECHNIQUE			EPA 7470A		Analyst: NS	
RunID: AA1_010405C	BatchID: 3679		PrepDate: 4/5/01			
Mercury	ND	0.0040		mg/L	2	4/5/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
Lab Order: 050405
Project: Thomas Short - E
Lab ID: 050405-003A

Client Sample ID: MW-6
Collection Date: 3/29/01 11:10:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID		EPA 8015B(M)			Analyst: JPC	
RunID: GC6_010405A	BatchID: I018G20W056					PrepDate:
GRO	0.26	0.20		mg/L	1	4/5/01
VOLATILE ORGANIC COMPOUNDS BY GC/PID		EPA 8020A			Analyst: JPC	
RunID: GC6_010405A	BatchID: I018G20W056					PrepDate:
Benzene	52	0.50		µg/L	1	4/5/01
Ethylbenzene	1.1	0.50		µg/L	1	4/5/01
m,p-Xylene	ND	0.50		µg/L	1	4/5/01
MTBE	ND	0.50		µg/L	1	4/5/01
o-Xylene	ND	0.50		µg/L	1	4/5/01
Toluene	0.62	0.50		µg/L	1	4/5/01
VOLATILE ORGANIC COMPOUNDS BY GC/MS		EPA 8260B			Analyst: DJK	
RunID: MS2_010404A	BatchID: Q01VOCW074					PrepDate:
Di-isopropyl ether	ND	5.0		µg/L	1	4/4/01
Ethyl tert-butyl ether	ND	5.0		µg/L	1	4/4/01
MTBE	ND	5.0		µg/L	1	4/4/01
Tert-amyl methyl ether	ND	5.0		µg/L	1	4/4/01
Tert-Butanol	ND	200		µg/L	1	4/4/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
 Lab Order: 050405
 Project: Thomas Short - E
 Lab ID: 050405-003A

Client Sample ID: MW-6
 Collection Date: 3/29/01 11:10:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS			EPA 8260B		Analyst: DJK	
RunID: MS2_010404A	BatchID: Q01VOCW074		PrepDate:			
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	1	4/4/01
1,1,1-Trichloroethane	ND	5.0		µg/L	1	4/4/01
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	4/4/01
1,1,2-Trichloroethane	ND	5.0		µg/L	1	4/4/01
1,1-Dichloroethane	ND	5.0		µg/L	1	4/4/01
1,1-Dichloroethene	ND	5.0		µg/L	1	4/4/01
1,1-Dichloropropene	ND	5.0		µg/L	1	4/4/01
1,2,3-Trichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,2,3-Trichloropropane	ND	5.0		µg/L	1	4/4/01
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,2,4-Trimethylbenzene	ND	5.0		µg/L	1	4/4/01
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	4/4/01
1,2-Dibromoethane	ND	5.0		µg/L	1	4/4/01
1,2-Dichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,2-Dichloroethane	ND	5.0		µg/L	1	4/4/01
1,2-Dichloropropane	ND	5.0		µg/L	1	4/4/01
1,3,5-Trimethylbenzene	ND	5.0		µg/L	1	4/4/01
1,3-Dichlorobenzene	ND	5.0		µg/L	1	4/4/01
1,3-Dichloropropane	ND	5.0		µg/L	1	4/4/01
1,4-Dichlorobenzene	ND	5.0		µg/L	1	4/4/01
2,2-Dichloropropane	ND	5.0		µg/L	1	4/4/01
2-Chlorotoluene	ND	5.0		µg/L	1	4/4/01
4-Chlorotoluene	ND	5.0		µg/L	1	4/4/01
4-Isopropyltoluene	ND	5.0		µg/L	1	4/4/01
Benzene	35	5.0		µg/L	1	4/4/01
Bromobenzene	ND	5.0		µg/L	1	4/4/01
Bromodichloromethane	ND	5.0		µg/L	1	4/4/01
Bromoform	ND	5.0		µg/L	1	4/4/01
Bromomethane	ND	5.0		µg/L	1	4/4/01
Carbon tetrachloride	ND	5.0		µg/L	1	4/4/01
Chlorobenzene	ND	5.0		µg/L	1	4/4/01
Chloroethane	ND	5.0		µg/L	1	4/4/01
Chloroform	ND	5.0		µg/L	1	4/4/01
Chloromethane	ND	5.0		µg/L	1	4/4/01
cis-1,2-Dichloroethene	ND	5.0		µg/L	1	4/4/01
Dibromochloromethane	ND	5.0		µg/L	1	4/4/01
Dibromomethane	ND	5.0		µg/L	1	4/4/01
Dichlorodifluoromethane	ND	5.0		µg/L	1	4/4/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 4/9/01

CLIENT: Geocon Environmental
 Lab Order: 050405
 Project: Thomas Short - E
 Lab ID: 050405-003A

Client Sample ID: MW-6
 Collection Date: 3/29/01 11:10:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS			EPA 8260B		Analyst: DJK	
RunID: MS2_010404A	BatchID: Q01VOCW074		PrepDate:			
Ethylbenzene	ND	5.0		µg/L	1	4/4/01
Hexachlorobutadiene	ND	5.0		µg/L	1	4/4/01
Isopropylbenzene	ND	5.0		µg/L	1	4/4/01
m,p-Xylene	ND	5.0		µg/L	1	4/4/01
Methylene chloride	ND	5.0		µg/L	1	4/4/01
n-Butylbenzene	ND	5.0		µg/L	1	4/4/01
n-Propylbenzene	ND	5.0		µg/L	1	4/4/01
Naphthalene	ND	5.0		µg/L	1	4/4/01
o-Xylene	ND	5.0		µg/L	1	4/4/01
sec-Butylbenzene	ND	5.0		µg/L	1	4/4/01
Styrene	ND	5.0		µg/L	1	4/4/01
tert-Butylbenzene	ND	5.0		µg/L	1	4/4/01
Tetrachloroethene	ND	5.0		µg/L	1	4/4/01
Toluene	ND	5.0		µg/L	1	4/4/01
trans-1,2-Dichloroethene	ND	5.0		µg/L	1	4/4/01
Trichloroethene	ND	5.0		µg/L	1	4/4/01
Trichlorofluoromethane	ND	5.0		µg/L	1	4/4/01
Vinyl chloride	ND	5.0		µg/L	1	4/4/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 



Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
Lab Order: 050405
Project: Thomas Short - E
Lab ID: 050405-003B

Client Sample ID: MW-6
Collection Date: 3/29/01 11:10:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID		EPA 8015B(M)			Analyst: AP	
RunID: GC7_010405B	BatchID: 3666					PrepDate: 4/4/01
Diesel	0.42	0.050		mg/L	1	4/5/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: 

15

Advanced Technology Laboratories

Print Date: 4/9/01


CLIENT: Geocon Environmental
 Lab Order: 050405
 Project: Thomas Short - E
 Lab ID: 050405-003C

Client Sample ID: MW-6
 Collection Date: 3/29/01 11:10:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP			EPA 6010B			Analyst: EFR
RunID: ICP2_010405C	BatchID: 3635					PrepDate: 4/4/01
Antimony	ND	0.0050		mg/L	1	4/5/01
Arsenic	0.0091	0.0050		mg/L	1	4/5/01
Barium	0.11	0.0010		mg/L	1	4/5/01
Beryllium	ND	0.0010		mg/L	1	4/5/01
Cadmium	ND	0.0030		mg/L	1	4/5/01
Chromium	ND	0.0030		mg/L	1	4/5/01
Cobalt	0.0040	0.0030		mg/L	1	4/5/01
Copper	0.020	0.0030		mg/L	1	4/5/01
Lead	ND	0.0050		mg/L	1	4/5/01
Molybdenum	0.0054	0.0050		mg/L	1	4/5/01
Nickel	0.010	0.0030		mg/L	1	4/5/01
Selenium	ND	0.0050		mg/L	1	4/5/01
Silver	ND	0.0010		mg/L	1	4/5/01
Thallium	ND	0.0050		mg/L	1	4/5/01
Vanadium	ND	0.0030		mg/L	1	4/5/01
Zinc	0.37	0.010		mg/L	1	4/5/01
MERCURY BY COLD VAPOR TECHNIQUE			EPA 7470A			Analyst: NS
RunID: AA1_010405C	BatchID: 3679					PrepDate: 4/5/01
Mercury	ND	0.0040		mg/L	2	4/5/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: 





Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 09-Apr-01

CLIENT: Geocon Environmental
Work Order: 050405
Project: Thomas Short - E

QC SUMMARY REPORT Method Blank

Sample ID	Batch ID	Test Name	Units	mg/L	Analysis Date	Prep Date					
MB-3635	3635	DISSOLVED METALS BY ICP			4/5/01	4/4/01					
MBLK			SeqNo:		116253						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.0050									
Arsenic	ND	0.0050									J
Barium	ND	0.0010									
Beryllium	ND	0.0010									J
Cadmium	ND	0.0030									
Chromium	ND	0.0030									
Cobalt	ND	0.0030									
Copper	ND	0.0030									J
Lead	ND	0.0050									
Molybdenum	ND	0.0050									J
Nickel	ND	0.0030									J
Selenium	ND	0.0050									J
Silver	0.00105	0.0010									
Thallium	ND	0.0050									
Vanadium	ND	0.0030									
Zinc	ND	0.010									

Sample ID	Batch ID	Test Name	Units	mg/L	Analysis Date	Prep Date					
MB-3679	3679	MERCURY BY COLD VAPOR TECHNIQUE			4/5/01	4/5/01					
MBLK			SeqNo:		116702						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0020									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 M - Not Monitored. Highly Reactive
 S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials:



Advanced Technology
Laboratories

3275 Walnut Avenue

Signal Hill, CA 90807

Tel: 562 989-4045

Fax: 562 989-4040

CLIENT: Geocon Environmental
Work Order: 050405
Project: Thomas Short - E

QC SUMMARY REPORT

Method Blank

Sample ID	MB-3666	Batch ID:	3666	Test Name	DIESEL RANGE ORGANICS BY GC/FID			Units	mg/L	Analysis Date:	4/5/01	Prep Date:	4/4/01
MBLK				SeqNo:		116465							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Diesel	ND	0.050											

Sample ID	010405BLKW1	Batch ID:	I018G20W056	Test Name	GASOLINE RANGE ORGANICS BY GC/FID			Units	mg/L	Analysis Date:	4/5/01	Prep Date:	
MBLK				SeqNo:		116288							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
GRO	ND	0.20											

Sample ID	010405BLKW1	Batch ID:	I018G20W056	Test Name	VOLATILE ORGANIC COMPOUNDS BY GC/PID			Units	µg/L	Analysis Date:	4/5/01	Prep Date:	
MBLK				SeqNo:		116275							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Benzene	ND	0.50											
Ethylbenzene	ND	0.50											
m,p-Xylene	ND	0.50											
MTBE	ND	0.50											
o-Xylene	ND	0.50											
Toluene	ND	0.50											

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored, Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials:



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Environmental
Work Order: 050405
Project: Thomas Short - E

QC SUMMARY REPORT
Method Blank

Sample ID 010404BLKW1 Batch ID: Q01VOCW074 Test Name VOLATILE ORGANIC COMPOUNDS BY GC/MS Units µg/L Analysis Date: 4/4/01 Prep Date:

MBLK

SeqNo: 115730

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,2-Dichloropropane	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2-Chloroethyl vinyl ether	ND	5.0									
Benzene	ND	5.0									
Bromodichloromethane	ND	5.0									
Bromoform	ND	5.0									
Bromomethane	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	5.0									
Chloroform	ND	5.0									
Chloromethane	ND	5.0									
cis-1,3-Dichloropropene	ND	5.0									
Di-isopropyl ether	ND	5.0									
Ethyl tert-butyl ether	ND	5.0									
Ethylbenzene	ND	5.0									
m,p-Xylene	ND	5.0									
Methylene chloride	ND	5.0									
MTBE	ND	5.0									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored, Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials:



Advanced Technology
Laboratories

3275 Walnut Avenue

Signal Hill, CA 90807

Tel: 562 989-4045

Fax: 562 989-4040

CLIENT: Geocon Environmental
Work Order: 050405
Project: Thomas Short - E

QC SUMMARY REPORT
Method Blank

o-Xylene	ND	5.0
Tert-amyl methyl ether	ND	5.0
Tert-Butanol	ND	200
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	5.0

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials: 



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Environmental
Work Order: 050405
Project: Thomas Short - E

QC SUMMARY REPORT
Method Blank

Sample ID 010404BLKW1 Batch ID: Q01VOCW074 Test Name VOLATILE ORGANIC COMPOUNDS BY GC/MS Units µg/L Analysis Date: 4/4/01 Prep Date:

MBLK SeqNo: 115382

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0									
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,1-Dichloropropene	ND	5.0									
1,2,3-Trichlorobenzene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2,4-Trichlorobenzene	ND	5.0									
1,2,4-Trimethylbenzene	ND	5.0									
1,2-Dibromo-3-chloropropane	ND	5.0									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,2-Dichloropropane	ND	5.0									
1,3,5-Trimethylbenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2,2-Dichloropropane	ND	5.0									
2-Chlorotoluene	ND	5.0									
4-Chlorotoluene	ND	5.0									
4-Isopropyltoluene	ND	5.0									
Benzene	ND	5.0									
Bromobenzene	ND	5.0									
Bromodichloromethane	ND	5.0									
Bromoform	ND	5.0									

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank DO - Surrogate Diluted Out
 J - Analyte detected below quantitation limits M - Not Monitored, Highly Reactive
 R - RPD outside accepted recovery limits S - Spike/Surrogate outside of limits due to matrix interference

Initials:



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Work Order: 050405
Project: Thomas Short - E

QC SUMMARY REPORT
Method Blank

Bromomethane	ND	5.0
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	5.0
Chloroform	ND	5.0
Chloromethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
Dibromomethane	ND	5.0
Dichlorodifluoromethane	ND	5.0
Ethylbenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Isopropylbenzene	ND	5.0
m,p-Xylene	ND	5.0
Methylene chloride	ND	5.0
n-Butylbenzene	ND	5.0
n-Propylbenzene	ND	5.0
Naphthalene	ND	5.0
o-Xylene	ND	5.0
sec-Butylbenzene	ND	5.0
Styrene	ND	5.0
tert-Butylbenzene	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	5.0

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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DO - Surrogate Diluted Out

Initials:

Advanced Technology Laboratories

Date: 09-Apr-01

CLIENT: Geocon Environmental
 Work Order: 050405
 Project: Thomas Short - E

QC SUMMARY REPORT
 Sample Duplicate

Sample ID	050405-003CDU	Batch ID:	3635	Test Name	DISSOLVED METALS BY ICP	Units	mg/L	Analysis Date:	4/5/01	Prep Date:	4/4/01	
DUP												
						SeqNo:	116260					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	ND	0.0050	0	0	0	0	0	0	0	30		
Arsenic	0.00912	0.0050	0	0	0	0	0	0.00908	0	30		
Barium	0.12	0.0010	0	0	0	0	0	0.11	9	30		
Beryllium	0.00057	0.0010	0	0	0	0	0	0	200	30	JR	
Cadmium	ND	0.0030	0	0	0	0	0	0	0	30		
Chromium	0.00229	0.0030	0	0	0	0	0	0.00124	59	30	JR	
Cobalt	0.0046	0.0030	0	0	0	0	0	0.00398	14	30		
Copper	0.02	0.0030	0	0	0	0	0	0.02	0	30		
Lead	ND	0.0050	0	0	0	0	0	0	0	30		
Molybdenum	0.00574	0.0050	0	0	0	0	0	0.00545	5	30		
Nickel	0.01	0.0030	0	0	0	0	0	0.01	0	30		
Selenium	0.00441	0.0050	0	0	0	0	0	0.00367	18	30	J	
Silver	0.00093	0.0010	0	0	0	0	0	0.00089	4	30	J	
Thallium	0.0048	0.0050	0	0	0	0	0	0	200	30	JR	
Vanadium	0.00177	0.0030	0	0	0	0	0	0.00145	20	30	J	
Zinc	0.39	0.010	0	0	0	0	0	0.37	5	30		

Sample ID	050405-003C	Batch ID:	3679	Test Name	MERCURY BY COLD VAPOR TECHNIQUE	Units	mg/L	Analysis Date:	4/5/01	Prep Date:	4/5/01	
DUP												
						SeqNo:	116705					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury	ND	0.0040	0	0	0	0	0	0	0	30		

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank DO - Surrogate Diluted Out Initials:
 J - Analyte detected below quantitation limits M - Not Monitored, Highly Reactive
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Project: Thomas Short - E

QC SUMMARY REPORT
Sample Duplicate

Sample ID	Batch ID	Test Name	Units	mg/L	Analysis Date	Prep Date						
050405-001B	3666	DIESEL RANGE ORGANICS BY GC/FID			4/5/01	4/4/01						
DUP							SeqNo:	116476				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel	0.7844	0.050	0	0	0	0	0	0.6134	24	30		
050405-002A	I018G20W056	GASOLINE RANGE ORGANICS BY GC/FID			4/5/01							
DUP							SeqNo:	116296				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	2.424	0.20	0	0	0	0	0	2.717	11	30		
050405-002A	I018G20W056	VOLATILE ORGANIC COMPOUNDS BY GC/PID	µg/L		4/5/01							
DUP							SeqNo:	116283				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	33.91	0.50	0	0	0	0	0	34.95	3	30		
Ethylbenzene	3.052	0.50	0	0	0	0	0	3.504	14	30		
m,p-Xylene	1.766	0.50	0	0	0	0	0	1.949	10	30		
MTBE	ND	0.50	0	0	0	0	0	0	0	30		
o-Xylene	1.239	0.50	0	0	0	0	0	1.321	6	30		
Toluene	1.813	0.50	0	0	0	0	0	1.091	50	30	R	
050405-001A	Q01VOCW074	VOLATILE ORGANIC COMPOUNDS BY GC/MS	µg/L		4/4/01							
DUP							SeqNo:	115732				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Di-isopropyl ether	ND	5.0	0	0	0	0	0	0	0	30		
Ethyl tert-butyl ether	ND	5.0	0	0	0	0	0	0	0	30		
MTBE	ND	5.0	0	0	0	0	0	0	0	30		
Tert-amyl methyl ether	ND	5.0	0	0	0	0	0	0	0	30		
Tert-Butanol	ND	200	0	0	0	0	0	0	0	30		

Qualifiers: ND - Not Detected at the Reporting Limit
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M - Not Monitored, Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials:



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Project: Thomas Short - E

QC SUMMARY REPORT
Sample Duplicate

Sample ID 050405-001A Batch ID: Q01VOCW074 Test Name VOLATILE ORGANIC COMPOUNDS BY GC/MS Units µg/L Analysis Date: 4/4/01 Prep Date:

DUP		SeqNo: 115719										
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1,1,2-Tetrachloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1,1-Trichloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1,2,2-Tetrachloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1,2-Trichloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1-Dichloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,1-Dichloroethene	ND	5.0	0	0	0	0	0	0	0	30		
1,1-Dichloropropene	ND	5.0	0	0	0	0	0	0	0	30		
1,2,3-Trichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,2,3-Trichloropropane	ND	5.0	0	0	0	0	0	0	0	30		
1,2,4-Trichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,2,4-Trimethylbenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dibromo-3-chloropropane	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dibromoethane	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dichloroethane	ND	5.0	0	0	0	0	0	0	0	30		
1,2-Dichloropropane	ND	5.0	0	0	0	0	0	0	0	30		
1,3,5-Trimethylbenzene	7.5	5.0	0	0	0	0	0	7.72	3	30		
1,3-Dichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
1,3-Dichloropropane	ND	5.0	0	0	0	0	0	0	0	30		
1,4-Dichlorobenzene	ND	5.0	0	0	0	0	0	0	0	30		
2,2-Dichloropropane	ND	5.0	0	0	0	0	0	0	0	30		
2-Chlorotoluene	ND	5.0	0	0	0	0	0	0	0	30		
4-Chlorotoluene	ND	5.0	0	0	0	0	0	0	0	30		
4-Isopropyltoluene	8.44	5.0	0	0	0	0	0	8.45	0	30		
Benzene	66.51	5.0	0	0	0	0	0	67.23	1	30		
Bromobenzene	ND	5.0	0	0	0	0	0	0	0	30		
Bromodichloromethane	ND	5.0	0	0	0	0	0	0	0	30		
Bromoform	ND	5.0	0	0	0	0	0	0	0	30		

Qualifiers: ND - Not Detected at the Reporting Limit
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DO - Surrogate Diluted Out

Initials:

CLIENT: Geocon Environmental
Work Order: 050405
Project: Thomas Short - E

QC SUMMARY REPORT

Sample Duplicate

Bromomethane	ND	5.0	0	0	0	0	0	0	0	0	30
Carbon tetrachloride	ND	5.0	0	0	0	0	0	0	0	0	30
Chlorobenzene	ND	5.0	0	0	0	0	0	0	0	0	30
Chloroethane	ND	5.0	0	0	0	0	0	0	0	0	30
Chloroform	ND	5.0	0	0	0	0	0	0	0	0	30
Chloromethane	ND	5.0	0	0	0	0	0	0	0	0	30
cis-1,2-Dichloroethene	ND	5.0	0	0	0	0	0	0	0	0	30
Dibromochloromethane	ND	5.0	0	0	0	0	0	0	0	0	30
Dibromomethane	ND	5.0	0	0	0	0	0	0	0	0	30
Dichlorodifluoromethane	ND	5.0	0	0	0	0	0	0	0	0	30
Ethylbenzene	182.2	5.0	0	0	0	0	0	0	188.5	3	30
Hexachlorobutadiene	ND	5.0	0	0	0	0	0	0	0	0	30
Isopropylbenzene	170.8	5.0	0	0	0	0	0	0	175.2	3	30
m,p-Xylene	40.51	5.0	0	0	0	0	0	0	40.87	1	30
Methylene chloride	ND	5.0	0	0	0	0	0	0	0	0	30
n-Butylbenzene	25.37	5.0	0	0	0	0	0	0	25.56	1	30
n-Propylbenzene	272.5	5.0	0	0	0	0	0	0	282	3	30
Naphthalene	45.18	5.0	0	0	0	0	0	0	45.44	1	30
o-Xylene	ND	5.0	0	0	0	0	0	0	0	0	30
sec-Butylbenzene	12.16	5.0	0	0	0	0	0	0	12.5	3	30
Styrene	ND	5.0	0	0	0	0	0	0	0	0	30
tert-Butylbenzene	20.73	5.0	0	0	0	0	0	0	21.42	3	30
Tetrachloroethene	ND	5.0	0	0	0	0	0	0	0	0	30
Toluene	24.39	5.0	0	0	0	0	0	0	24.55	1	30
trans-1,2-Dichloroethene	ND	5.0	0	0	0	0	0	0	0	0	30
Trichloroethene	ND	5.0	0	0	0	0	0	0	0	0	30
Trichlorofluoromethane	ND	5.0	0	0	0	0	0	0	0	0	30
Vinyl chloride	ND	5.0	0	0	0	0	0	0	0	0	30

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

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M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials: P



Advanced Technology Laboratories

Date: 09-Apr-01

CLIENT: Geocon Environmental
 Work Order: 050405
 Project: Thomas Short - E

QC SUMMARY REPORT
 Sample Matrix Spike

Sample ID 050405-003CMS Batch ID: 3635 Test Name DISSOLVED METALS BY ICP Units mg/L Analysis Date: 4/5/01 Prep Date: 4/4/01

MS SeqNo: 116258

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.74	0.0050	2.5	0	110	69	116	0			
Arsenic	2.8	0.0050	2.5	0.00908	112	67	114	0			
Barium	2.45	0.0010	2.5	0.11	94	63	125	0			
Beryllium	2.44	0.0010	2.5	0	98	60	117	0			
Cadmium	2.4	0.0030	2.5	0	96	63	123	0			
Chromium	2.44	0.0030	2.5	0.00124	98	68	118	0			
Cobalt	2.58	0.0030	2.5	0.00398	103	68	118	0			
Copper	2.71	0.0030	2.5	0.02	108	72	123	0			
Lead	2.68	0.0050	2.5	0	107	66	118	0			
Molybdenum	2.64	0.0050	2.5	0.00545	105	65	111	0			
Nickel	2.55	0.0030	2.5	0.01	102	64	121	0			
Selenium	2.91	0.0050	2.5	0.00367	116	62	109	0			S
Silver	1.15	0.0010	2.5	0.00089	46	71	137	0			S
Thallium	2.74	0.0050	2.5	0	110	67	122	0			
Vanadium	2.6	0.0030	2.5	0.00145	104	69	118	0			
Zinc	2.6	0.010	2.5	0.37	89	65	112	0			

Qualifiers: ND - Not Detected at the Reporting Limit
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DO - Surrogate Diluted Out

Initials:



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CLIENT: Geocon Environmental
Work Order: 050405
Project: Thomas Short - E

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID 050405-003CMS Batch ID: 3635		Test Name DISSOLVED METALS BY ICP				Units mg/L	Analysis Date: 4/5/01	Prep Date: 4/4/01			
MSD		SeqNo: 116259									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.74	0.0050	2.5	0	110	69	116	2.74	0	20	
Arsenic	2.8	0.0050	2.5	0.00908	112	67	114	2.8	0	20	
Barium	2.46	0.0010	2.5	0.11	94	63	125	2.45	0	20	
Beryllium	2.43	0.0010	2.5	0	97	60	117	2.44	0	20	
Cadmium	2.4	0.0030	2.5	0	96	63	123	2.4	0	20	
Chromium	2.44	0.0030	2.5	0.00124	98	68	118	2.44	0	20	
Cobalt	2.57	0.0030	2.5	0.00398	103	68	118	2.58	0	20	
Copper	2.71	0.0030	2.5	0.02	108	72	123	2.71	0	20	
Lead	2.66	0.0050	2.5	0	106	66	118	2.68	1	20	
Molybdenum	2.64	0.0050	2.5	0.00545	105	65	111	2.64	0	20	
Nickel	2.55	0.0030	2.5	0.01	102	64	121	2.55	0	20	
Selenium	2.93	0.0050	2.5	0.00367	117	62	109	2.91	1	20	S
Silver	0.79	0.0010	2.5	0.00089	32	71	137	1.15	37	20	SR
Thallium	2.72	0.0050	2.5	0	109	67	122	2.74	1	20	
Vanadium	2.58	0.0030	2.5	0.00145	103	69	118	2.6	1	20	
Zinc	2.69	0.010	2.5	0.37	93	65	112	2.6	3	20	

Sample ID 050405-003C Batch ID: 3679		Test Name MERCURY BY COLD VAPOR TECHNIQUE				Units mg/L	Analysis Date: 4/5/01	Prep Date: 4/5/01			
MS		SeqNo: 116706									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.01992	0.0040	0.02	0	100	69	144	0			

Sample ID 050405-003C Batch ID: 3679		Test Name MERCURY BY COLD VAPOR TECHNIQUE				Units mg/L	Analysis Date: 4/5/01	Prep Date: 4/5/01			
MSD		SeqNo: 116707									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.02037	0.0040	0.02	0	102	69	144	0.01992	2	20	

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank DO - Surrogate Diluted Out **Initials:**
 J - Analyte detected below quantitation limits M - Not Monitored, Highly Reactive
 R - RPD outside accepted recovery limits S - Spike/Surrogate outside of limits due to matrix interference

QC SUMMARY REPORT
Sample Matrix Spike

CLIENT: Geocon Environmental
Work Order: 050405
Project: Thomas Short - E

Sample ID	Batch ID	Test Name	Units	mg/L	Analysis Date	Prep Date						
MB-3666	3666	DIESEL RANGE ORGANICS BY GC/FID			4/5/01	4/4/01						
MS			SeqNo:	116474								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel	0.8022	0.050	1	0	80	50	150	0				
MB-3666	3666	DIESEL RANGE ORGANICS BY GC/FID			4/5/01	4/4/01						
MSD			SeqNo:	116475								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel	0.8523	0.050	1	0	85	50	150	0.8022	6	40		
010405BLKW1	I018G20W056	GASOLINE RANGE ORGANICS BY GC/FID			4/5/01							
MS			SeqNo:	116289								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	0.931	0.20	1	0	93	50	119	0				
010405BLKW1	I018G20W056	GASOLINE RANGE ORGANICS BY GC/FID			4/5/01							
MSD			SeqNo:	116290								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	0.945	0.20	1	0	95	50	119	0.931	1	20		
010405BLKW1	I018G20W056	VOLATILE ORGANIC COMPOUNDS BY GC/PID	µg/L		4/5/01							
MS			SeqNo:	116276								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	4.694	0.50	5.5	0	85	60	136	0				
Toluene	24.61	0.50	30	0	82	61	128	0				

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank DO - Surrogate Diluted Out Initials:
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QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID 010405BLKW1 Batch ID: I018G20W056 Test Name VOLATILE ORGANIC COMPOUNDS BY GC/PID Units µg/L Analysis Date: 4/5/01 Prep Date:

MSD SeqNo: 116277

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	4.828	0.50	5.5	0	88	60	136	4.694	3	18	
Toluene	25.72	0.50	30	0	86	61	128	24.61	4	22	

Sample ID 010404BLKW1 Batch ID: Q01VOCW074 Test Name VOLATILE ORGANIC COMPOUNDS BY GC/MS Units µg/L Analysis Date: 4/4/01 Prep Date:

MS SeqNo: 115380

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	111.1	5.0	100	0	111	71	120	0			
Benzene	114.1	5.0	100	0	114	82	122	0			
Chlorobenzene	101.2	5.0	100	0	101	81	121	0			
Toluene	112.1	5.0	100	0	112	81	125	0			
Trichloroethene	113.3	5.0	100	0	113	80	123	0			

Sample ID 010404BLKW1 Batch ID: Q01VOCW074 Test Name VOLATILE ORGANIC COMPOUNDS BY GC/MS Units µg/L Analysis Date: 4/4/01 Prep Date:

MSD SeqNo: 115381

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	97.13	5.0	100	0	97	71	120	111.1	13	21	
Benzene	102.7	5.0	100	0	103	82	122	114.1	11	19	
Chlorobenzene	92.3	5.0	100	0	92	81	121	101.2	9	18	
Toluene	99.46	5.0	100	0	99	81	125	112.1	12	20	
Trichloroethene	102.5	5.0	100	0	102	80	123	113.3	10	20	

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S - Spike/Surrogate outside of limits due to matrix interference

DO - Surrogate Diluted Out

Initials:



Advanced Technology Laboratories

Date: 09-Apr-01

CLIENT: Geocon Environmental
 Work Order: 050405
 Project: Thomas Short - E

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID LCS-3635 Batch ID: 3635 Test Name DISSOLVED METALS BY ICP Units mg/L Analysis Date: 4/5/01 Prep Date: 4/4/01

LCS											
SeqNo: 116254											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1	0.0050	1	0	100	80	120	0			
Arsenic	1	0.0050	1	0.00271	100	80	120	0			
Barium	0.94	0.0010	1	0	94	80	120	0			
Beryllium	0.98	0.0010	1	0.00028	98	80	120	0			
Cadmium	1	0.0030	1	0	100	80	120	0			
Chromium	0.98	0.0030	1	0	98	80	120	0			
Cobalt	1	0.0030	1	0	100	80	120	0			
Copper	0.98	0.0030	1	0.00194	98	80	120	0			
Lead	1	0.0050	1	0	100	80	120	0			
Molybdenum	1	0.0050	1	0.00215	100	80	120	0			
Nickel	1.01	0.0030	1	0.00249	101	80	120	0			
Selenium	1	0.0050	1	0.00326	100	80	120	0			
Silver	1	0.0010	1	0.00105	100	80	120	0			
Thallium	0.98	0.0050	1	0	98	80	120	0			
Vanadium	1.01	0.0030	1	0	101	80	120	0			
Zinc	0.96	0.010	1	0	96	80	120	0			

Sample ID LCS-3679 Batch ID: 3679 Test Name MERCURY BY COLD VAPOR TECHNIQUE Units mg/L Analysis Date: 4/5/01 Prep Date: 4/5/01

LCS											
SeqNo: 116701											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.02537	0.0020	0.025	0	101	80	120	0			

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Initials:



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QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID	LCS-3666	Batch ID:	3666	Test Name	DIESEL RANGE ORGANICS BY GC/FID			Units mg/L	Analysis Date:	4/5/01	Prep Date:	4/4/01	
LCS							SeqNo:	116473					
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel		0.7642		0.050	1	0	76	60	140	0			

Sample ID	010405LCSW1	Batch ID:	I018G20W056	Test Name	GASOLINE RANGE ORGANICS BY GC/FID			Units mg/L	Analysis Date:	4/5/01	Prep Date:		
LCS							SeqNo:	116300					
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO		0.83		0.20	1	0	83	64	107	0			

Sample ID	010405LCSW1	Batch ID:	I018G20W056	Test Name	VOLATILE ORGANIC COMPOUNDS BY GC/PID			Units µg/L	Analysis Date:	4/5/01	Prep Date:		
LCS							SeqNo:	116287					
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		4.332		0.50	5.5	0	79	58	131	0			
Ethylbenzene		6.955		0.50	8.6	0	81	58	131	0			
m,p-Xylene		28.28		0.50	35	0	81	58	131	0			
MTBE		72.76		0.50	101	0	72	58	131	0			
o-Xylene		10.23		0.50	12	0	85	58	131	0			
Toluene		23.4		0.50	30	0	78	58	131	0			

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CLIENT: Geocon Environmental
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Project: Thomas Short - E

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID 010404LCSW1 Batch ID: Q01VOCW074 Test Name VOLATILE ORGANIC COMPOUNDS BY GC/MS Units µg/L Analysis Date: 4/4/01 Prep Date:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	SeqNo:
												115379
1,1,1-Trichloroethane	115.4	5.0	100	0	115	30	150	0				
1,1,2,2-Tetrachloroethane	90.14	5.0	100	0	90	30	150	0				
1,1,2-Trichloroethane	123.1	5.0	100	0	123	30	150	0				
1,1-Dichloroethane	115.8	5.0	100	0	116	30	150	0				
1,1-Dichloroethene	117.3	5.0	100	0	117	30	150	0				
1,2-Dichlorobenzene	87.61	5.0	100	0	88	30	150	0				
1,2-Dichloroethane	128.2	5.0	100	0	128	30	150	0				
1,2-Dichloropropane	117.4	5.0	100	0	117	30	150	0				
1,3-Dichlorobenzene	86.84	5.0	100	0	87	30	150	0				
1,3-Dichloropropane	107.7	5.0	100	0	108	30	150	0				
1,4-Dichlorobenzene	89.14	5.0	100	0	89	30	150	0				
2-Chlorotoluene	89.67	5.0	100	0	90	30	150	0				
Benzene	122	5.0	100	0	122	30	150	0				
Bromodichloromethane	118.2	5.0	100	0	118	30	150	0				
Bromoform	117.5	5.0	100	0	118	30	150	0				
Bromomethane	108.4	5.0	100	0	108	30	150	0				
Carbon tetrachloride	113	5.0	100	0	113	30	150	0				
Chlorobenzene	109.9	5.0	100	0	110	30	150	0				
Chloroethane	119.9	5.0	100	0	120	30	150	0				
Chloroform	118.9	5.0	100	0	119	30	150	0				
Chloromethane	120.3	5.0	100	0	120	30	150	0				
Dibromomethane	128.6	5.0	100	0	129	30	150	0				
Dichlorodifluoromethane	130.2	5.0	100	0	130	30	150	0				
Ethylbenzene	107.4	5.0	100	0	107	30	150	0				
m,p-Xylene	220.1	5.0	200	0	110	30	150	0				
Methylene chloride	116	5.0	100	0	116	30	150	0				
o-Xylene	108.9	5.0	100	0	109	30	150	0				
Tetrachloroethene	110.8	5.0	100	0	111	30	150	0				

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QC SUMMARY REPORT
Laboratory Control Spike - generic

Toluene	118.6	5.0	100	0	119	30	150	0
trans-1,2-Dichloroethene	112.9	5.0	100	0	113	30	150	0
Trichloroethene	123.8	5.0	100	0	124	30	150	0
Trichlorofluoromethane	123.3	5.0	100	0	123	30	150	0
Vinyl chloride	114.6	5.0	100	0	115	30	150	0

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