

LIMITED GROUNDWATER INVESTIGATION REPORT

EASTBOUND AND WESTBOUND INTERSTATE 580 BETWEEN FIRST STREET AND VASCO ROAD LIVERMORE, CALIFORNIA

PREPARED FOR:
CALTRANS DISTRICT 4
111 GRAND AVENUE, 12TH FLOOR
OAKLAND, CA 94623

PREPARED BY:
GEOCON CONSULTANTS, INC.
6671 BRISA STREET
LIVERMORE, CALIFORNIA

RECEIVED

9:04 am, Feb 23, 2010

Alameda County
Environmental Health



GEOCON PROJECT NO. E8415-06-62
CALTRANS EA 04-290844

FEBRUARY 2010



Project No. E8415-06-62
February 16, 2010

Mr. Chris Bledsoe
Caltrans – District 4
111 Grand Avenue
Oakland, California 94612

Subject: LIMITED GROUNDWATER INVESTIGATION REPORT
FORMER UUNDERGROUND STORAGE TANKS LOCATED BENEATH
EASTBOUND INTERSTATE 580 BETWEEN FIRST STREET AND VASCO ROAD
LIVERMORE, CALIFORNIA
CONTRACT NO. 43A0199, EA 04-290844

Dear Mr. Bledsoe:

Geocon has prepared this *Limited Groundwater Investigation Report* on behalf of Caltrans - District 4. The report contains details of field services and laboratory analytical results.

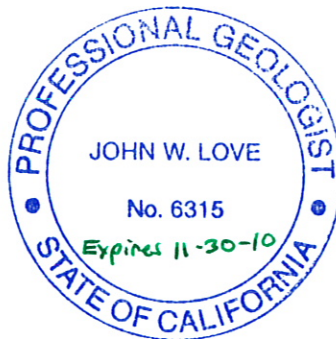
A copy of Caltrans' authorization letter to submit the report to the Alameda County Health Care Services Agency is provided in Appendix F. Please contact the undersigned if you have any questions or comments.

Sincerely,

GEOCON CONSULTANTS, INC.

John Love, PG
Sr. Project Geologist

JWL:RWD



Richard Day, CEG, CHG
Regional Manager

- (3) Addressee
- (1) Jerry Wickham, Alameda County Environmental Health (electronic submittal)

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
1.1 Site Description and Location	1
1.2 Background	1
2.0 CPT BORING ADVANCEMENT	3
2.1 Pre-Field Activities	3
2.2 CPT Boring Location	4
2.3 Depth-Discrete Grab Groundwater Sample Collection	4
2.4 Grab Groundwater Sample Analysis and Results	5
2.4.1 CPT-1	5
2.4.2 CPT-2 and CPT-3	5
2.5 Equipment Decontamination and Waste Disposal	6
3.0 LITHOLOGIC AND HYDROGEOLOGIC CONDITIONS	6
3.1 CPT-1	6
3.2 CPT-2	7
3.3 CPT-3	7
4.0 CONCLUSIONS AND RECOMMENDATIONS	9

FIGURES

1. Vicinity Map
2. Site Plan

TABLES

1. Grab Groundwater Sample Results

APPENDICES

- A. Regulatory Correspondence
- B. Zone 7 Water Agency Drilling Permit
- C. Analytical Laboratory Data Sheets
- D. Boring Logs
- E. Zone 7 Water Agency Well Location Map
- F. Transmittal Letter

LIMITED GROUNDWATER INVESTIGATION REPORT

1.0 INTRODUCTION

Geocon performed a limited groundwater investigation at the request of the Alameda County Health Care Services Agency (ACHCSA) in the vicinity of four underground storage tanks (USTs) discovered beneath Interstate 580 (I-580) in Livermore, California.

The purpose of this investigation was to assess whether an unauthorized UST release discovered in April 2009 has the potential to impact drinking water supply wells within the area. The plume (if one exists) is expected to reside in large part beneath the roadway of I-580, and therefore is not considered a threat to sensitive receptors other than potential drinking water sources.

The additional investigation was performed in general accordance with the *Workplan to Conduct Limited Groundwater Investigation*, prepared by Geocon dated July 22, 2009. The scope of services presented in the workplan was approved by the ACHCSA on September 3, 2009. A copy of the ACHCSA correspondence approving the work presented in this report is provided in Appendix A.

1.1 Site Description and Location

The site is a former UST facility that was recently paved over as part of the I-580 high occupancy vehicle (HOV) lane expansion of eastbound I-580 near Vasco Road in Livermore, California. Four USTs were discovered during freeway construction activities in April 2009 and the location of which is now situated beneath the eastbound Vasco Road off ramp approximately 1,350 feet west of Vasco Road (Figure 1). The USTs were removed prior to the freeway expansion.

For the purposes of this investigation the site is considered as the immediate area surrounding the former USTs as well as the area located within the cone penetrometer test (CPT) borings CPT-1 through CPT-3 (see Figure 2).

1.2 Background

On April 2, 2009, Caltrans notified Geocon that De Silva Gates Construction had discovered an UST beneath the existing shoulder area of eastbound I-580 (south side of the freeway) during the HOV lane construction project. Upon inspection of the UST area later that day by Geocon personnel, it was apparent that at least two USTs were present, and that they were both filled with water.

On April 3, 2009, Geocon removed the soil overlying the USTs and discovered that four USTs were present. The USTs consisted of three 250-gallon tanks and one 600-gallon tank. Each of the USTs was full of water.

Later that day (April 3, 2009) water in each of the USTs was pumped out with a vacuum truck provided by NRC Environmental and the four USTs were removed from the ground and loaded onto a truck for recycling at the West Coast Equipment facility in Turlock, California. The water removed from the USTs was manifested and disposed as non-RCRA hazardous waste at the Evergreen Oil, Inc. facility in Newark, California.

During the UST removal activities it was obvious that petroleum hydrocarbons had been released from the tanks. Bluish-green staining was visible in soils underlying the USTs and a noticeable petroleum odor was present. We over-excavated impacted soils with the backhoe that same day; however the reach of the backhoe bucket was only 12 feet and obvious soil staining was still present at that depth.

Geocon mobilized an excavator to the site the following day (April 4, 2009), and the depth of the excavation was extended to between 18 and 20 feet (the maximum reach of the excavator). Petroleum hydrocarbon odors and some soil staining were still present at 20 feet (though noticeably less); however the stability of the excavation cavity was a safety concern since the north wall of the excavation was only 10 feet from the edge of the I-580 freeway, and groundwater was seeping into the excavation at a depth of approximately 12 feet. As a result of these circumstances, the excavation was considered complete. The dimensions of the completed excavation measured approximately 24 feet long by 15 feet wide by 18 feet deep.

Six soil samples were collected from the completed excavation before groundwater accumulated in the pit. Four samples were collected at the bottom of the north, south, east, and west sidewalls at depths of approximately 19 feet, and two soil samples were collected from the bottom of the middle portion of the pit at depths of approximately 20 feet.

Analytical results of the excavation soil samples indicate some residual impacts to soil remain in-place beneath the former USTs. The contaminants were identified by the laboratory as consisting of degraded gasoline and diesel fuel.

The highest contaminant concentrations remaining in-place were reported in the soil samples collected along the base of the north sidewall at a depth of 19 feet, and the bottom of the excavation towards the east half of the pit at a depth of 20 feet. Total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd) were reported in the north sidewall sample at concentrations of 1,100 milligrams per kilogram (mg/kg) and 360 mg/kg, respectively; and the samples collected from the bottom of the excavation

towards the eastern portion of the pit were reported at concentrations of 1,500 mg/kg (TPHg) and 700 mg/kg (TPHd). Benzene and toluene were not detected in these two samples, and ethylbenzene and xylenes were reported for both samples at concentrations ranging from 1.7 micrograms per kilogram (ug/kg) to 2.7 ug/kg.

On April 4, 2009, after the excavation was completed, approximately 270 tons of 3-inch-minus drain rock was placed in the excavation to a depth of approximately 3-feet below grade. The excavation was later completed and compacted by Caltrans' construction contractor. The former UST area was paved over as part of the highway improvement project.

On April 9, 2009, approximately 270 tons of petroleum hydrocarbon-impacted soil excavated from the site was disposed at the Altamont Class II landfill in Livermore, California.

An *UST Removal Report*, dated May 11, 2009, detailing the UST removal activities was submitted to the ACHCSA on May 14, 2009.

Prior to submittal of the *UST Removal Report*, the ACHCSA issued a letter, dated May 7, 2009, directing Caltrans to investigate potential groundwater contamination in the area and hydraulically downgradient of the former tank pit, as well as impacts to soil immediately surrounding the former tank pit area. A copy of the ACHCSA letter is provided as Appendix A.

On July 22, 2009, we submitted a *Workplan to Conduct Limited Groundwater Investigation* to the ACHCSA. The workplan described the advancement of three CPT borings as shown on Figure 2. On September 3, 2009 the ACHCSA issued a letter concurring with the scope of services presented in the workplan.

2.0 CPT BORING ADVANCEMENT

On October 15 and 16, 2009, a CPT rig provided by Gregg Drilling and Testing, Inc. was utilized to collect depth-discrete groundwater samples to assess potential impacts to groundwater near and down gradient from the former USTs.

2.1 Pre-Field Activities

Prior to conducting the field sampling, Geocon conducted a utility clearance to minimize the potential that underground utilities would be encountered during the field investigation. Underground Services Alert (USA) was contacted and Cruz Brothers Locators, a private utility locating service, was contracted to verify subsurface utility locations.

A site specific health and safety plan was prepared which provided guidelines on the use of personal protective equipment and the health and safety procedures to be implemented during the event of an emergency or accident.

Traffic control, which included night-time lane closures, was provided by Caltrans.

2.2 CPT Boring Location

CPT-1 was advanced through the asphalt road surface of I-580 adjacent to the west side of the former UST excavation, and CPT-2 and CPT-3 were advanced on the northwest side of I-580 to assess potential impacts to groundwater in the downgradient groundwater flow direction from the former USTs. Information obtained from a file search of two leaking UST sites located at 909 Bluebell Drive and 461 McGraw Avenue in Livermore (see Figure 1) indicates the groundwater flow direction beneath the area is towards the west-northwest.

2.3 Depth-Discrete Grab Groundwater Sample Collection

Two boreholes were advanced at each CPT boring location. The first borehole was used to collect continuous lithologic data, and the second borehole was advanced to collect depth-discrete groundwater samples based on the lithologic data collected from the first borehole.

Depth-discrete grab groundwater samples were collected from each boring location using a Hydropunch® sampler. The Hydropunch® sampler consists of a 1¾-inch diameter hollow stainless steel tube lined with a 4½-foot-long PVC well screen, which is sealed at the bottom of the tube with a steel tip. Groundwater samples are collected by driving the Hydropunch® sampler into subsurface soils to a target sample depth using a series of threaded-together hollow stainless steel drive rods. The Hydropunch® sampler and connecting drive rods effectively serve as a conductor casing minimizing cross contamination between target sample intervals. Once the Hydropunch® sample assembly has reached the bottom of the target sample depth, the rod assembly is retracted back towards ground surface, thereby releasing the steel tip from the end of the Hydropunch® sampler and exposing the encased PVC well screen to the surrounding formation. Groundwater is then retrieved through the center of the push rods using a small diameter stainless steel bailer. Once a groundwater sample is collected, the Hydropunch® sampler and connecting push rods are removed from the ground, the assembly is steam cleaned and air dried, and the Hydropunch® sampler is relined with a new PVC well screen for use in the same borehole at a deeper sample interval.

Once groundwater samples were collected from each boring location, all boreholes were backfilled by placing Portland cement from the bottom of each borehole to near ground surface, and then repairing the ground surface with concrete.

2.4 Grab Groundwater Sample Analysis and Results

The groundwater samples collected during the October 2009 investigation were analyzed for TPHg, BTEX, and volatile organic compounds (VOCs) following EPA Test Method 8260B. Groundwater samples were also analyzed for TPHd following EPA Test Method 8015M where enough water was collected to perform this analysis.

Analytical laboratory results of grab groundwater samples are tabulated in Table 1, and copies of the analytical laboratory data sheets are provided in Appendix C.

2.4.1 CPT-1

CPT-1 was advanced adjacent to the west side of the former UST excavation to assess the vertical impacts to groundwater near the former source area. Based on the log generated during the advancement of CPT-1, we attempted to collect depth-discrete groundwater samples from 10 to 14 feet, 22 to 26 feet, and at several depth intervals between 36 to 46 feet.

Groundwater was not encountered between 10 and 14 feet, or between 36 and 46 feet. A groundwater sample was collected from 22 to 26 feet; however there was not enough water to fill a 1-liter container necessary for the laboratory to analyze the sample for TPHd.

Analytical results for the groundwater sample collected from 22 to 26 feet were reported as non-detect for TPHg, BTEX, and VOCs.

2.4.2 CPT-2 and CPT-3

CPT-2 and CPT-3 were advanced along the northwest shoulder of westbound I-580 to assess groundwater quality downgradient of the former USTs (see Figure 2). Based on the CPT logs, we collected groundwater samples at CPT-2 from 24 to 28 feet, and 41 to 45 feet; and at CPT-3 from 10 to 14 feet, 25 to 29 feet, and 45 to 49 feet. An attempt to collect a groundwater sample at CPT-2 from 11 to 15 feet was made; however groundwater was not present in this borehole between these depths.

TPHg, TPHd, and BTEX were not detected in the three groundwater samples collected from CPT-3, and TPHg and BTEX were not detected in the groundwater samples collected from CPT-2.

TPHd was reported at a concentration of 73 micrograms per liter (ug/l) in the groundwater sample collected at CPT-2 from 24 to 28 feet, and at a concentration of 130 ug/l in the groundwater sample collected from 41 to 45 feet.

The only VOC detected at a concentration greater than the reporting limits during this investigation was 1,1-dichloroethane (1,1-DCA). It was reported at a concentration of 1.1 ug/l in the 41- to 45-foot groundwater sample collected from CPT-2, and the 45- to 49-foot groundwater sample collected from CPT-3. 1,1-DCA was also reported at a concentration of 0.58 ug/l in the 25- to 29-foot groundwater sample collected from CPT-2.

2.5 Equipment Decontamination and Waste Disposal

The CPT drill rig drive rods were decontaminated as they were removed from the ground. As the rods were retrieved from the borehole they were drawn through a circular-shaped squeegee, which mechanically removed soil and moisture from the rods. The rods were then steam cleaned prior to use in the next borehole.

Rinsate fluids were containerized in one 55-gallon drum. The drum was hauled to Geocon's warehouse in Livermore pending disposal arrangements.

3.0 LITHOLOGIC AND HYDROGEOLOGIC CONDITIONS

Soils logged during this investigation consisted primarily of sandy silt and clayey silt from near ground surface to 50 feet, the total depth of each borehole. Increased sand was likely present in zones where groundwater was interpreted as potentially existing or confirmed present.

Water bearing zones were present at different depths in each boring and were identified on the CPT boring logs provided in Appendix D as zones of low pore pressure (u) coupled with increased cone resistance (q_t) and friction (f_s).

3.1 CPT-1

Groundwater was only encountered in one of the sample intervals attempted at CPT-1. The CPT-1 boring log indicated areas of low pore pressure (approximately 45 pounds per square foot [psi]) near 12 feet, 23 feet, and 43 feet; however the correlating q_t measurements at 12 and 43 feet were relatively low (approximately 50 tons per square foot [tsf]), indicating the presence of fine grain sediments at these depths which could inhibit the flow of groundwater. Presumably, the presence of fine grain sediments

between these depths prevented groundwater from entering the Hydropunch sampler and attempts to collect groundwater samples from these depth intervals were unsuccessful.

A groundwater sample was collected from 22- to 26-feet bgs in CPT-1, however slow groundwater recharge at this depth interval precluded the collection of one additional liter of groundwater necessary to conduct a TPHd analysis.

The boring log from CPT-1 indicates there may be increased sand from 23 to 24 feet below ground surface (bgs) which facilitated groundwater sample collection between 22 and 26 feet. The q_t measurement of approximately 100 tsf at 23 feet was nearly double the highest q_t measurements recorded elsewhere in this borehole.

3.2 CPT-2

Based on the boring log generated at CPT-2, groundwater was anticipated to be present at depths of 12, 20, 26, 33, and 43 feet. An attempt to collect a groundwater sample between the depths of 11 and 15 feet was made to confirm whether groundwater was present between these depths; however the Hydropunch sample screen remained dry after it was open for 10 minutes and the effort to collect a shallow-depth groundwater sample from CPT-2 between 11 and 15 feet was abandoned.

Groundwater samples were collected from CPT-2 between depths ranging from 24 to 28 feet and 41 to 45 feet. Groundwater recharge at these depths was sufficient to collect the full suite of scheduled laboratory analysis.

The q_t measurement (approximately 70 tsf) near 26 feet indicates that increased sand may be present near this depth, and the q_t measurement (approximately 160 tsf) observed near 43 feet indicates that sand and gravel may be present from 42 to 44 feet bgs.

3.3 CPT-3

Based on the boring log generated at CPT-3, groundwater was potentially present from 10 to 12 feet, near 26 and 36 feet, and 44 to 50 feet.

Groundwater samples were collected between depths of 10 to 14 feet, 25 to 29 feet, and 45 to 49 feet. Groundwater recharge at these depths was sufficient to collect the full suite of scheduled laboratory analysis.

The q_t measurements (approximately 220 to 260 tsf) recorded near 12 and 47 feet indicate that sand and gravel is likely present near these depths, and the q_t measurement of 60 tsf recorded near 26 feet indicates that groundwater collected within soils located from 25 to 29 feet is likely situated within a sandy matrix.

The q_t measurements of 90 and 60 tsf recorded near 17 and 36 feet, respectively, coupled with low pore pressure measurements at these depths indicates that groundwater is likely present near 17 and 36 feet within a sandy matrix similar to that observed near 26 feet.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this investigation, the following conditions were observed:

- Groundwater was observed seeping into the UST excavation around 12 feet bgs during the soil over-excavation activities conducted in April 2009; however it was not observed between the depths of 10 and 14 feet during the recent groundwater investigation.
- TPHg, BTEX, and VOC concentrations were not detected in the groundwater sample collected at CPT-1 (adjacent to the former UST excavation) between the depths of 22 and 26 feet.
- TPHd was reported for two groundwater samples collected at CPT-2. TPHd was reported at a concentration of 73 ug/l for the 24- to 28-foot interval sample, and it was reported at a concentration of 130 ug/l for the 41- to 45-foot interval sample.
- 1,1-DCA was reported in the 41- to 45-foot interval sample from CPT-2; and the 25- to 29-foot and 45- to 49-foot interval samples from CPT-3. The concentrations ranged from 0.56 to 1.1 ug/l and appeared to increase with depth.

Based on these observations, the following is concluded:

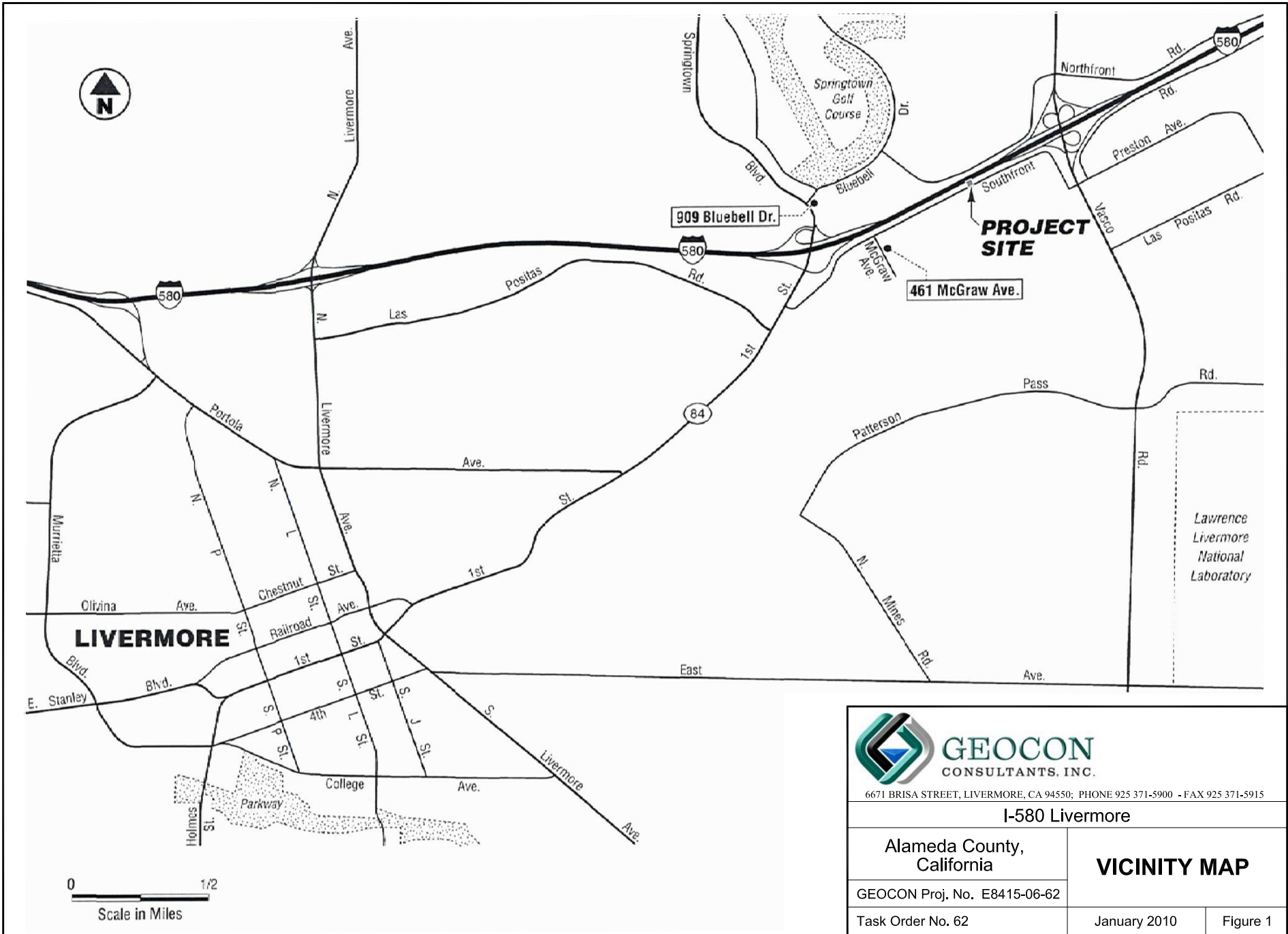
- It appears the vertical and lateral migration of contaminants through groundwater has likely been inhibited by relatively low permeability fine sands, silts, and clay located near the former UST excavation area. This conclusion is supported by field observations noted during the soil over-excavation activities conducted in April 2009; as well as lithologic conditions logged in CPT-1, and groundwater analysis for sample results collected from CPT-1 between the depths of 22 and 26 feet.
- The source of the TPHd reported for both groundwater samples collected from CPT-2, and the 1,1-DCA reported for groundwater samples collected from CPT-2 and CPT-3 is unknown.


It is possible that the source of the TPHd reported for CPT-2 groundwater samples was the release of fuel from the former USTs. Unfortunately, we were unable to eliminate the former USTs as the most likely source because we were unable to collect a sufficient volume of groundwater sample from CPT-1 to analyze for TPHd. However, it should be pointed out that the TPHg concentrations reported in the excavation confirmation soil samples collected in April 2009 were, in most instances, more than twice the TPHd concentrations, and TPHg was not detected in the CPT-1 groundwater sample.

Assuming the TPHd concentrations reported for the CPT-2 groundwater samples did originate from the former USTs, the 73 ug/l and 130 ug/l concentrations are either below or near the San Francisco Bay Regional Water Quality Control Board's Tier 1 Environmental Screening Level of 100 ug/l (Table F-1a Groundwater Screening Levels, Groundwater is a current or Potential Drinking Water Source, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, May 2008). Additionally, the nearest down gradient production wells 2S/2E 35L 2 and 2S/2E 35I 10 (see Well Location Map provided by the Zone 7 Water Agency in Appendix E) are located more than 2,000 feet north of CPT-2, and are unlikely to be impacted by TPHd originating from the former USTs, especially since the USTs have been removed and the most heavily impacted soil underlying the USTs has been removed.

The source of the 1,1-DCA reported in CPT-2 and CPT-3 is unknown, however the reported concentrations of 0.53 ug/l and 1.1 ug/l are all below the drinking water maximum contaminant level (MCL) of 5.0 ug/l.

Based on the results of this investigation, we recommend the ACHCSA consider this site for case closure.



 <p>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</p>	
I-580 Livermore	
Alameda County, California	
VICINITY MAP	
GEOCON Proj. No. E8415-06-62	
Task Order No. 62	January 2010
	Figure 1



6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915

I-580 Livermore

Alameda County,
California

**SAMPLE
LOCATION MAP**

GEOCON Proj. No. E8415-06-62

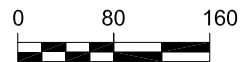
Task Order No. 62

January 2010

Figure 2

LEGEND:

⊕ Proposed Sample Location



SCALE: feet

Table 1
Grab Groundwater Sample Results
Caltrans I-580
Livermore, California

Sample Location	Sample Date	Sample Interval (feet bgs)	TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	VOCs (ug/l)
CPT-1	10/16/09	22-26	<50	NA	<0.50	<0.50	<0.50	<1.5	ND
CPT-2	10/15/09	24-28	<50	73	<0.50	<0.50	<0.50	<1.5	ND
CPT-2	10/15/09	41-45	<50	130	<0.50	<0.50	<0.50	<1.5	1,1-DCA = 1.1
CPT-3	10/15/09	10-14	<50	<56	<0.50	<0.50	<0.50	<1.5	ND
CPT-3	10/15/09	25-29	<50	<56	<0.50	<0.50	<0.50	<1.5	1,1-DCA = 0.58
CPT-3	10/15/09	45-49	<50	<50	<0.50	<0.50	<0.50	<1.5	1,1-DCA = 1.1

Notes:

VOCs - Volatile organic compounds. Only those compounds reported above the laboratory reporting limits are listed in table.

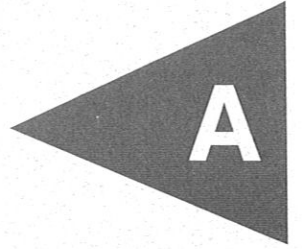
Bold type indicates analyte reported above method detection limit concentration.

ug/l - Micrograms per liter

NA - Not analyzed

ND - Not detected

APPENDIX



ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-93

May 7, 2009

Mr. Randy Barker
Caltrans
111 Grand Avenue
Oakland, CA 94612

Subject: Fuel Leak Case No. RO0003000 and Geotracker Global ID T10000001071, Caltrans I-580 EB Shoulder, I-580 Freeway, Livermore, CA 94550

Dear Mr. Barker:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above referenced site. During a construction project to widen eastbound Interstate 580, three 250-gallon USTs and one 600-gallon UST were encountered beneath the new eastbound lane. The history and previous ownership of the USTs is unknown. Under the direction of the Livermore-Pleasanton Fire Department, the USTs were removed on April 3, 2009. Visibly stained and odorous soil was observed in the area below and surrounding the USTs. Contaminated soil was removed from the excavation to the extent practicable. Confirmation soil samples collected from the excavation contained total petroleum hydrocarbons as gasoline at concentrations up to 1,500 milligrams per kilogram. Based on observations of contaminated soil during the UST removal and soil sampling results in the area of the USTs, an unauthorized release occurred from the USTs.

The site is within the Livermore-Amador Valley, which is an area where groundwater is actively used as a drinking water supply. Groundwater within the Livermore-Amador Groundwater Basin constitutes a valuable current and future resource. Due to the indication of a fuel release and the location of your site within a groundwater basin where groundwater is used for drinking water, we request that you complete a site investigation to evaluate whether groundwater has been affected by the release. Please submit a work plan detailing your proposal to investigate potential soil and groundwater contamination by July 24, 2009.

We understand that the former UST tank pit is currently beneath an active roadway and that access to the former tank pit is not possible. However, we request that the assessment focus on evaluating whether contamination from the former tank pit has significantly affected water quality in the area of and hydraulically downgradient of the former tank pit.

We request that you also submit an Underground Storage Tank Unauthorized Release (Leak) Form and a Final Tank Removal Report to complete documentation of the tank removal. These two documents are to be submitted to both the Livermore-Pleasanton Fire Department and Alameda County Environmental Health. The Final Tank Removal Report is to include a description of the tank removal, excavation, confirmation sampling methods and detailed map of sampling locations, analytical results, soil and tank disposal manifests, and other pertinent documentation.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **May 18, 2009** – Underground Storage Tank Unauthorized Release (Leak) Form
- **June 10, 2009** – Final Tank Removal Report
- **July 24, 2009** – Work Plan

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

LANDOWNER NOTIFICATION REQUIREMENTS

Pursuant to California Health & Safety Code Section 25297.15, the active or primary responsible party for a fuel leak case must inform all current property owners of the site of cleanup actions or requests for closure. Furthermore, ACEH may not consider any cleanup proposals or requests for case closure without assurance that this notification requirement has been met. Additionally, the active or primary responsible party is required to forward to ACEH a complete mailing list of all record fee title holders to the site. We have received your letter dated April 15, 2006, which meets this requirement.

In the future, for you to meet these requirements when submitting cleanup proposals or requests for case closure, ACEH requires that you:

1. Notify all current record owners of fee title to the site of any cleanup proposals or requests for case closure;
2. Submit a letter to ACEH which certifies that the notification requirement in 25297.15(a) of the Health and Safety Code has been met;
3. Forward to ACEH a copy of your complete mailing list of all record fee title holders to the site; and
4. Update your mailing list of all record fee title holders, and repeat the process outlined above prior to submittal of any additional *Corrective Action Plan* or your *Request for Case Closure*.

Your written certification to ACEH (Item 2 above) must state, at a minimum, the following:

- A. *In accordance with Section 25297.15(a) of the Health & Safety Code, I, (name of primary responsible party), certify that I have notified all responsible landowners of the enclosed proposed action. (Check space for applicable proposed action(s)):*
- cleanup proposal (Corrective Action Plan)*
 - request for case closure*
 - local agency intention to make a determination that no further action is required*
 - local agency intention to issue a closure letter*

- OR -

- B. *In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, I, (name of primary responsible party), certify that I am the sole landowner for the above site.*

Randy Barker
RO0003000
May 7, 2009
Page 4

(Note: Complete item A if there are multiple site landowners. If you are the sole site landowner, skip item A and complete item B.)

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,



Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Cheryl Dizon, QIC 80201, Zone 7 Water Agency, 100 North Canyons Parkway,
Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street
Pleasanton, CA 94566

Dennis English, Caltrans, 111 Grand Avenue, Oakland, CA 94612

John Love, Geocon Environmental Consultants, 6671 Brisa Street, Livermore, CA 94550

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-93

September 3, 2009

Mr. Chris Bledsoe
Caltrans
111 Grand Avenue
Oakland, CA 94612

Subject: Fuel Leak Case No. RO0003000 and Geotracker Global ID T10000001071, Caltrans I-580 EB Shoulder, I-580 Freeway, Livermore, CA 94550 – Work Plan Approval

Dear Mr. Bledsoe:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above referenced site including the recently submitted work plan entitled, "Workplan to Conduct Limited Groundwater Investigation, Eastbound Interstate 580 between First Street and Vasco Road, Livermore, California," dated July 22, 2009. The Work Plan proposes advancing three soil borings using a cone penetrometer test (CPT) drill rig for the purpose of collecting depth-discrete grab groundwater samples. The proposed scope of work is acceptable as proposed.

We request that you perform the proposed work and submit the results in a Site Investigation Report by January 24, 2010.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **January 26, 2010** – Site Investigation Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells,

and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

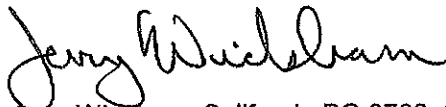
AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

Chris Bledsoe, Caltrans
RO0003000
September 3, 2009
Page 3

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,



Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

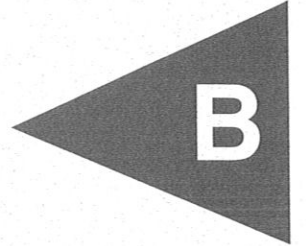
cc: Cheryl Dizon, QIC 80201, Zone 7 Water Agency, 100 North Canyons Parkway,
Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street
Pleasanton, CA 94566

John Love, Geocon Environmental Consultants, 6671 Brisa Street, Livermore, CA 94550

Donna Drogos, ACEH
Jerry Wickham, ACEH
Geotracker, File

APPENDIX





ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306

E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT East + west-bound I-580, Shoulder of freeway ~ 1/4 mile west of Vasco Rd. overcrossing (see attached map)

Coordinates Source Google Earth ft. Accuracy 10 ft.
LAT: 37° 42' 25" ft. LONG: 121° 43' 41" ft.
APN Caltrans right of way

CLIENT

Name Caltrans District 4
Address 111 Grand Ave, 12th Flr Phone 510-286-6022
City Oakland Zip 94623

APPLICANT

Name John Love Gecon Consultants, Inc.
Email love@geconinc.com Fax 925-371-5915
Address 6671 Brisa St. Phone 925-371-5900
City Livermore Zip 94550

TYPE OF PROJECT:

Well Construction	9	Geotechnical Investigation	9
Well Destruction	9	Contamination Investigation	X
Cathodic Protection	9	Other	9

PROPOSED WELL USE:

Domestic	9	Irrigation	9
Municipal	9	Remediation	9
Industrial	9	Groundwater Monitoring	9
Dewatering	9	Other	9

DRILLING METHOD:

Mud Rotary	9	Air Rotary	9	Hollow Stem Auger	9
Cable Tool	9	Direct Push	X	Other	9

DRILLING COMPANY Gregg Drilling & Testing, Inc.

DRILLER'S LICENSE NO. _____

WELL SPECIFICATIONS:

Drill Hole Diameter 3 in. Maximum
Casing Diameter _____ in. Depth 50 ft.
Surface Seal Depth _____ ft. Number _____

SOIL BORINGS:

Number of Borings 3 Maximum
Hole Diameter 3 in. Depth 50 ft.

ESTIMATED STARTING DATE Oct. 14, 2009

ESTIMATED COMPLETION DATE Oct. 15, 2009

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

APPLICANT'S SIGNATURE [Signature] Date 9/28/09

ATTACH SITE PLAN OR SKETCH

PERMIT NUMBER 29070

WELL NUMBER _____

APN _____

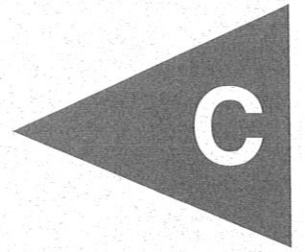
PERMIT CONDITIONS

(Circled Permit Requirements Apply)

- A. GENERAL
 1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
 2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller.
 3. Permit is void if project not begun within 90 days of approval date.
- B. WATER SUPPLY WELLS
 1. Minimum surface seal diameter is four inches greater than the well casing diameter.
 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
 3. Grout placed by tremie.
 4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
 5. A sample port is required on the discharge pipe near the wellhead.
- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
 1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
 3. Grout placed by tremie.
- D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.
- E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.
- F. WELL DESTRUCTION. See attached.
- G. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report including all soil and water laboratory analysis results.

Approved [Signature] Date 9/29/09
Wymarr Hong

APPENDIX



October 26, 2009



John Love
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
TEL: (925) 525-4142
FAX: (925) 371-5915

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
CSDLAC No.: 10196

Workorder No.: 108197

RE: Caltrans I-580, E8415-06-62

Attention: John Love

Enclosed are the results for sample(s) received on October 17, 2009 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	CPT-2 (24'-28')
Lab Order:	108197	Collection Date:	10/15/2009 11:45:00 AM
Project:	Caltrans I-580, E8415-06-62	Matrix:	GROUNDWATER
Lab ID:	108197-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_091021A	QC Batch: Q09VW203	PrepDate:	Analyst: SLL
--------------------	--------------------	-----------	--------------

1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
2-Chlorotoluene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
4-Chlorotoluene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Benzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Bromobenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Bromodichloromethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Bromoform	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Bromomethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Carbon tetrachloride	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Chlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Chloroethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Chloroform	ND	0.50	µg/L	1	10/21/2009 02:05 PM
Chloromethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 02:05 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-2 (24'-28')

Lab Order: 108197

Collection Date: 10/15/2009 11:45:00 AM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-001A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS2_091021A	QC Batch:	Q09VW203	PrepDate:	Analyst:	SLL
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Dibromochloromethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Dibromomethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Ethylbenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Isopropylbenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
m,p-Xylene	ND	1.0	µg/L	1	10/21/2009 02:05 PM	
Methylene chloride	ND	1.0	µg/L	1	10/21/2009 02:05 PM	
n-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
n-Propylbenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Naphthalene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
o-Xylene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Styrene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Tetrachloroethene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Toluene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Trichloroethene	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Vinyl chloride	ND	0.50	µg/L	1	10/21/2009 02:05 PM	
Surr: 1,2-Dichloroethane-d4	107	70-130	%REC	1	10/21/2009 02:05 PM	
Surr: 4-Bromofluorobenzene	97.8	70-130	%REC	1	10/21/2009 02:05 PM	
Surr: Dibromofluoromethane	104	70-130	%REC	1	10/21/2009 02:05 PM	
Surr: Toluene-d8	106	70-130	%REC	1	10/21/2009 02:05 PM	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-2 (24'-28')

Lab Order: 108197

Collection Date: 10/15/2009 11:45:00 AM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-001B

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
GRO	ND	0.050	mg/L	1	10/19/2009 02:40 PM
Surr: Bromofluorobenzene (FID)	95.7	71-130	%REC	1	10/19/2009 02:40 PM

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8021B

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
Benzene	ND	0.50	µg/L	1	10/19/2009 02:40 PM
Ethylbenzene	ND	0.50	µg/L	1	10/19/2009 02:40 PM
m,p-Xylene	ND	1.0	µg/L	1	10/19/2009 02:40 PM
o-Xylene	ND	0.50	µg/L	1	10/19/2009 02:40 PM
Toluene	ND	0.50	µg/L	1	10/19/2009 02:40 PM
Surr: Bromofluorobenzene (PID)	84.6	73-127	%REC	1	10/19/2009 02:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	CPT-2 (24'-28')
Lab Order:	108197	Collection Date:	10/15/2009 11:45:00 AM
Project:	Caltrans I-580, E8415-06-62	Matrix:	GROUNDWATER
Lab ID:	108197-001C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID						
	EPA 3510C		EPA 8015B(M)			
RunID: GC16_091019A	QC Batch: 59086			PrepDate: 10/19/2009		Analyst: CBR
DRO	0.073	0.062		mg/L	1	10/19/2009 05:39 PM
Surr: p-Terphenyl	67.2	35-131		%REC	1	10/19/2009 05:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	CPT-2 (41'-45')
Lab Order:	108197	Collection Date:	10/15/2009 12:15:00 PM
Project:	Caltrans I-580, E8415-06-62	Matrix:	GROUNDWATER
Lab ID:	108197-002A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_091021A	QC Batch: Q09VW203	PrepDate:	Analyst: SLL		
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,1-Dichloroethane	1.1	0.50	µg/L	1	10/21/2009 02:50 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
2-Chlorotoluene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
4-Chlorotoluene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Benzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Bromobenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Bromodichloromethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Bromoform	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Bromomethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Carbon tetrachloride	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Chlorobenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Chloroethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Chloroform	ND	0.50	µg/L	1	10/21/2009 02:50 PM
Chloromethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 02:50 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-2 (41'-45')

Lab Order: 108197

Collection Date: 10/15/2009 12:15:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-002A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS2_091021A	QC Batch:	Q09VW203	PrepDate:	Analyst:	SLL
	cis-1,3-Dichloropropene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Dibromochloromethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Dibromomethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Dichlorodifluoromethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Ethylbenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Hexachlorobutadiene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Isopropylbenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	m,p-Xylene	ND	1.0	µg/L	1	10/21/2009 02:50 PM
	Methylene chloride	ND	1.0	µg/L	1	10/21/2009 02:50 PM
	n-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	n-Propylbenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Naphthalene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	o-Xylene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	sec-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Styrene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	tert-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Tetrachloroethene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Toluene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	trans-1,2-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Trichloroethene	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Trichlorofluoromethane	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Vinyl chloride	ND	0.50	µg/L	1	10/21/2009 02:50 PM
	Surr: 1,2-Dichloroethane-d4	96.4	70-130	%REC	1	10/21/2009 02:50 PM
	Surr: 4-Bromofluorobenzene	87.8	70-130	%REC	1	10/21/2009 02:50 PM
	Surr: Dibromofluoromethane	94.7	70-130	%REC	1	10/21/2009 02:50 PM
	Surr: Toluene-d8	98.7	70-130	%REC	1	10/21/2009 02:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-2 (41'-45')

Lab Order: 108197

Collection Date: 10/15/2009 12:15:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-002B

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
GRO	ND	0.050	mg/L	1	10/19/2009 03:01 PM
Surr: Bromofluorobenzene (FID)	93.6	71-130	%REC	1	10/19/2009 03:01 PM

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8021B

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
Benzene	ND	0.50	µg/L	1	10/19/2009 03:01 PM
Ethylbenzene	ND	0.50	µg/L	1	10/19/2009 03:01 PM
m,p-Xylene	ND	1.0	µg/L	1	10/19/2009 03:01 PM
o-Xylene	ND	0.50	µg/L	1	10/19/2009 03:01 PM
Toluene	ND	0.50	µg/L	1	10/19/2009 03:01 PM
Surr: Bromofluorobenzene (PID)	82.6	73-127	%REC	1	10/19/2009 03:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-2 (41'-45')

Lab Order: 108197

Collection Date: 10/15/2009 12:15:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-002C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID						
	EPA 3510C		EPA 8015B(M)			
RunID: GC16_091019A	QC Batch: 59086			PrepDate: 10/19/2009		Analyst: CBR
DRO	0.13	0.056		mg/L	1	10/19/2009 05:48 PM
Surr: p-Terphenyl	59.1	35-131		%REC	1	10/19/2009 05:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	CPT-3 (10'-14')
Lab Order:	108197	Collection Date:	10/15/2009 2:30:00 PM
Project:	Caltrans I-580, E8415-06-62	Matrix:	GROUNDWATER
Lab ID:	108197-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_091022A	QC Batch: Q09VW205	PrepDate:	Analyst: SLL
--------------------	--------------------	-----------	--------------

1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,1-Dichloroethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,1-Dichloroethene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,1-Dichloropropene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,2-Dibromoethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,2-Dichloroethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,2-Dichloropropane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,3-Dichloropropane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
2,2-Dichloropropane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
2-Chlorotoluene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
4-Chlorotoluene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
4-Isopropyltoluene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Benzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Bromobenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Bromodichloromethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Bromoform	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Bromomethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Carbon tetrachloride	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Chlorobenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Chloroethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Chloroform	ND	0.50	µg/L	1	10/22/2009 10:24 AM
Chloromethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/22/2009 10:24 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-3 (10'-14')

Lab Order: 108197

Collection Date: 10/15/2009 2:30:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-003A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS2_091022A	QC Batch:	Q09VW205	PrepDate:	Analyst:	SLL
	cis-1,3-Dichloropropene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Dibromochloromethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Dibromomethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Dichlorodifluoromethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Ethylbenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Hexachlorobutadiene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Isopropylbenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	m,p-Xylene	ND	1.0	µg/L	1	10/22/2009 10:24 AM
	Methylene chloride	ND	1.0	µg/L	1	10/22/2009 10:24 AM
	n-Butylbenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	n-Propylbenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Naphthalene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	o-Xylene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	sec-Butylbenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Styrene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	tert-Butylbenzene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Tetrachloroethene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Toluene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	trans-1,2-Dichloroethene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Trichloroethene	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Trichlorofluoromethane	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Vinyl chloride	ND	0.50	µg/L	1	10/22/2009 10:24 AM
	Surr: 1,2-Dichloroethane-d4	98.5	70-130	%REC	1	10/22/2009 10:24 AM
	Surr: 4-Bromofluorobenzene	89.9	70-130	%REC	1	10/22/2009 10:24 AM
	Surr: Dibromofluoromethane	94.8	70-130	%REC	1	10/22/2009 10:24 AM
	Surr: Toluene-d8	94.0	70-130	%REC	1	10/22/2009 10:24 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-3 (10'-14')

Lab Order: 108197

Collection Date: 10/15/2009 2:30:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-003B

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
GRO	ND	0.050	mg/L	1	10/19/2009 03:22 PM
Surr: Bromofluorobenzene (FID)	96.7	71-130	%REC	1	10/19/2009 03:22 PM

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8021B

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
Benzene	ND	0.50	µg/L	1	10/19/2009 03:22 PM
Ethylbenzene	ND	0.50	µg/L	1	10/19/2009 03:22 PM
m,p-Xylene	ND	1.0	µg/L	1	10/19/2009 03:22 PM
o-Xylene	ND	0.50	µg/L	1	10/19/2009 03:22 PM
Toluene	ND	0.50	µg/L	1	10/19/2009 03:22 PM
Surr: Bromofluorobenzene (PID)	85.3	73-127	%REC	1	10/19/2009 03:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-3 (10'-14')

Lab Order: 108197

Collection Date: 10/15/2009 2:30:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-003C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID						
	EPA 3510C		EPA 8015B(M)			
RunID: GC16_091019A	QC Batch: 59086				PrepDate: 10/19/2009	Analyst: CBR
DRO	ND	0.056		mg/L	1	10/19/2009 05:57 PM
Surr: p-Terphenyl	68.4	35-131		%REC	1	10/19/2009 05:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	CPT-3 (25'-29')
Lab Order:	108197	Collection Date:	10/15/2009 2:45:00 PM
Project:	Caltrans I-580, E8415-06-62	Matrix:	GROUNDWATER
Lab ID:	108197-004A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_091022A	QC Batch: Q09VW205	PrepDate:	Analyst: SLL
--------------------	--------------------	-----------	--------------

1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,1-Dichloroethane	0.58	0.50	µg/L	1	10/22/2009 11:08 AM
1,1-Dichloroethene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,1-Dichloropropene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,2-Dibromoethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,2-Dichloroethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,2-Dichloropropane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,3-Dichloropropane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
2,2-Dichloropropane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
2-Chlorotoluene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
4-Chlorotoluene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
4-Isopropyltoluene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Benzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Bromobenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Bromodichloromethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Bromoform	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Bromomethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Carbon tetrachloride	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Chlorobenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Chloroethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Chloroform	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Chloromethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/22/2009 11:08 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	CPT-3 (25'-29')
Lab Order:	108197	Collection Date:	10/15/2009 2:45:00 PM
Project:	Caltrans I-580, E8415-06-62	Matrix:	GROUNDWATER
Lab ID:	108197-004A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_091022A	QC Batch: Q09VW205	PrepDate:	Analyst: SLL		
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Dibromochloromethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Dibromomethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Dichlorodifluoromethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Ethylbenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Hexachlorobutadiene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Isopropylbenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
m,p-Xylene	ND	1.0	µg/L	1	10/22/2009 11:08 AM
Methylene chloride	ND	1.0	µg/L	1	10/22/2009 11:08 AM
n-Butylbenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
n-Propylbenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Naphthalene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
o-Xylene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
sec-Butylbenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Styrene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
tert-Butylbenzene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Tetrachloroethene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Toluene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Trichloroethene	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Trichlorofluoromethane	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Vinyl chloride	ND	0.50	µg/L	1	10/22/2009 11:08 AM
Surr: 1,2-Dichloroethane-d4	110	70-130	%REC	1	10/22/2009 11:08 AM
Surr: 4-Bromofluorobenzene	96.0	70-130	%REC	1	10/22/2009 11:08 AM
Surr: Dibromofluoromethane	103	70-130	%REC	1	10/22/2009 11:08 AM
Surr: Toluene-d8	103	70-130	%REC	1	10/22/2009 11:08 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-3 (25'-29')

Lab Order: 108197

Collection Date: 10/15/2009 2:45:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-004B

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
GRO	ND	0.050	mg/L	1	10/19/2009 03:43 PM
Surr: Bromofluorobenzene (FID)	96.6	71-130	%REC	1	10/19/2009 03:43 PM

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8021B

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
Benzene	ND	0.50	µg/L	1	10/19/2009 03:43 PM
Ethylbenzene	ND	0.50	µg/L	1	10/19/2009 03:43 PM
m,p-Xylene	ND	1.0	µg/L	1	10/19/2009 03:43 PM
o-Xylene	ND	0.50	µg/L	1	10/19/2009 03:43 PM
Toluene	ND	0.50	µg/L	1	10/19/2009 03:43 PM
Surr: Bromofluorobenzene (PID)	85.3	73-127	%REC	1	10/19/2009 03:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-3 (25'-29')

Lab Order: 108197

Collection Date: 10/15/2009 2:45:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-004C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID						
	EPA 3510C		EPA 8015B(M)			
RunID: GC16_091019A	QC Batch: 59086			PrepDate: 10/19/2009		Analyst: CBR
DRO	ND	0.056		mg/L	1	10/19/2009 06:06 PM
Surr: p-Terphenyl	77.4	35-131		%REC	1	10/19/2009 06:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.	Client Sample ID: CPT-3 (45'-49')
Lab Order: 108197	Collection Date: 10/15/2009 3:00:00 PM
Project: Caltrans I-580, E8415-06-62	Matrix: GROUNDWATER
Lab ID: 108197-005A	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS2_091021A	QC Batch: Q09VW203	PrepDate:	Analyst: SLL
--------------------	--------------------	-----------	--------------

1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,1-Dichloroethane	1.1	0.50	µg/L	1	10/21/2009 03:32 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
2-Chlorotoluene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
4-Chlorotoluene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Benzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Bromobenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Bromodichloromethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Bromoform	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Bromomethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Carbon tetrachloride	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Chlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Chloroethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Chloroform	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Chloromethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 03:32 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-3 (45'-49')

Lab Order: 108197

Collection Date: 10/15/2009 3:00:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-005A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS2_091021A	QC Batch:	Q09VW203	PrepDate:	Analyst: SLL
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Dibromochloromethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Dibromomethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Dichlorodifluoromethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Ethylbenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Hexachlorobutadiene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Isopropylbenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
m,p-Xylene	ND	1.0	µg/L	1	10/21/2009 03:32 PM
Methylene chloride	ND	1.0	µg/L	1	10/21/2009 03:32 PM
n-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
n-Propylbenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Naphthalene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
o-Xylene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
sec-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Styrene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
tert-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Tetrachloroethene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Toluene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Trichloroethene	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Trichlorofluoromethane	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Vinyl chloride	ND	0.50	µg/L	1	10/21/2009 03:32 PM
Surr: 1,2-Dichloroethane-d4	87.1	70-130	%REC	1	10/21/2009 03:32 PM
Surr: 4-Bromofluorobenzene	78.8	70-130	%REC	1	10/21/2009 03:32 PM
Surr: Dibromofluoromethane	86.0	70-130	%REC	1	10/21/2009 03:32 PM
Surr: Toluene-d8	87.3	70-130	%REC	1	10/21/2009 03:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-3 (45'-49')

Lab Order: 108197

Collection Date: 10/15/2009 3:00:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-005B

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
GRO	ND	0.050	mg/L	1	10/19/2009 04:04 PM
Surr: Bromofluorobenzene (FID)	95.7	71-130	%REC	1	10/19/2009 04:04 PM

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8021B

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
Benzene	ND	0.50	µg/L	1	10/19/2009 04:04 PM
Ethylbenzene	ND	0.50	µg/L	1	10/19/2009 04:04 PM
m,p-Xylene	ND	1.0	µg/L	1	10/19/2009 04:04 PM
o-Xylene	ND	0.50	µg/L	1	10/19/2009 04:04 PM
Toluene	ND	0.50	µg/L	1	10/19/2009 04:04 PM
Surr: Bromofluorobenzene (PID)	84.5	73-127	%REC	1	10/19/2009 04:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-3 (45'-49')

Lab Order: 108197

Collection Date: 10/15/2009 3:00:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-005C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS BY GC/FID						
	EPA 3510C		EPA 8015B(M)			
RunID: GC16_091019A	QC Batch: 59086				PrepDate: 10/19/2009	Analyst: CBR
DRO	ND	0.050		mg/L	1	10/19/2009 06:15 PM
Surr: p-Terphenyl	61.5	35-131		%REC	1	10/19/2009 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-1 (22'-26')

Lab Order: 108197

Collection Date: 10/16/2009 1:55:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-006A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS2_091021A	QC Batch:	Q09VW203	PrepDate:	Analyst:	SLL
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Benzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Bromobenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Bromodichloromethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Bromoform	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Bromomethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Chlorobenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Chloroethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Chloroform	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Chloromethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-1 (22'-26')

Lab Order: 108197

Collection Date: 10/16/2009 1:55:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-006A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS2_091021A	QC Batch:	Q09VW203	PrepDate:	Analyst:	SLL
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Dibromochloromethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Dibromomethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Ethylbenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Isopropylbenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
m,p-Xylene	ND	1.0	µg/L	1	10/21/2009 03:12 PM	
Methylene chloride	ND	1.0	µg/L	1	10/21/2009 03:12 PM	
n-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
n-Propylbenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Naphthalene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
o-Xylene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Styrene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Tetrachloroethene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Toluene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Trichloroethene	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Vinyl chloride	ND	0.50	µg/L	1	10/21/2009 03:12 PM	
Surr: 1,2-Dichloroethane-d4	99.3	70-130	%REC	1	10/21/2009 03:12 PM	
Surr: 4-Bromofluorobenzene	90.2	70-130	%REC	1	10/21/2009 03:12 PM	
Surr: Dibromofluoromethane	97.7	70-130	%REC	1	10/21/2009 03:12 PM	
Surr: Toluene-d8	100	70-130	%REC	1	10/21/2009 03:12 PM	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 26-Oct-09

CLIENT: Geocon Consultants, Inc.

Client Sample ID: CPT-1 (22'-26')

Lab Order: 108197

Collection Date: 10/16/2009 1:55:00 PM

Project: Caltrans I-580, E8415-06-62

Matrix: GROUNDWATER

Lab ID: 108197-006B

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
GRO	ND	0.050	mg/L	1	10/19/2009 04:25 PM
Surr: Bromofluorobenzene (FID)	93.7	71-130	%REC	1	10/19/2009 04:25 PM

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8021B

RunID: GC6_091019A	QC Batch: I09VW0192	PrepDate:	Analyst: BD		
Benzene	ND	0.50	µg/L	1	10/19/2009 04:25 PM
Ethylbenzene	ND	0.50	µg/L	1	10/19/2009 04:25 PM
m,p-Xylene	ND	1.0	µg/L	1	10/19/2009 04:25 PM
o-Xylene	ND	0.50	µg/L	1	10/19/2009 04:25 PM
Toluene	ND	0.50	µg/L	1	10/19/2009 04:25 PM
Surr: Bromofluorobenzene (PID)	82.7	73-127	%REC	1	10/19/2009 04:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DSL LL

Sample ID: MB-59086	SampType: MBLK	TestCode: 8015_W_DSL	Units: mg/L	Prep Date: 10/19/2009	RunNo: 114135						
Client ID: PBW	Batch ID: 59086	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 10/19/2009	SeqNo: 1809291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	ND	0.050									
Surr: p-Terphenyl	0.063		0.08000		78.9	35	131				

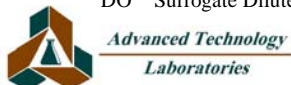
Sample ID: MB-59086MS	SampType: MS	TestCode: 8015_W_DSL	Units: mg/L	Prep Date: 10/19/2009	RunNo: 114135						
Client ID: ZZZZZZ	Batch ID: 59086	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 10/19/2009	SeqNo: 1809293						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	0.957	0.050	1.000	0	95.7	42	118				
Surr: p-Terphenyl	0.048		0.08000		60.6	35	131				

Sample ID: MB-59086MSD	SampType: MSD	TestCode: 8015_W_DSL	Units: mg/L	Prep Date: 10/19/2009	RunNo: 114135						
Client ID: ZZZZZZ	Batch ID: 59086	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 10/19/2009	SeqNo: 1809294						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	0.961	0.050	1.000	0	96.1	42	118	0.9567	0.428	20	
Surr: p-Terphenyl	0.045		0.08000		56.1	35	131		0	0	

Sample ID: LCS-59086	SampType: LCS	TestCode: 8015_W_DSL	Units: mg/L	Prep Date: 10/19/2009	RunNo: 114135						
Client ID: LCSW	Batch ID: 59086	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 10/19/2009	SeqNo: 1809295						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	0.915	0.050	1.000	0	91.5	42	118				
Surr: p-Terphenyl	0.042		0.08000		52.3	35	131				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_GP LL

Sample ID: 1091019LCS2	SampType: LCS	TestCode: 8015_W_GP	Units: mg/L	Prep Date:	RunNo: 114161						
Client ID: LCSW	Batch ID: I09VW0192	TestNo: EPA 8015B(M)		Analysis Date: 10/19/2009	SeqNo: 1807626						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.956	0.050	1.000	0	95.6	69	125				
Surr: Bromofluorobenzene (FID)	98.620		100.0		98.6	71	130				

Sample ID: 1091019MB1MS	SampType: MS	TestCode: 8015_W_GP	Units: mg/L	Prep Date:	RunNo: 114161						
Client ID: ZZZZZ	Batch ID: I09VW0192	TestNo: EPA 8015B(M)		Analysis Date: 10/19/2009	SeqNo: 1807627						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.880	0.050	1.000	0	88.0	69	125				
Surr: Bromofluorobenzene (FID)	96.490		100.0		96.5	71	130				

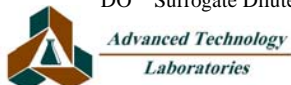
Sample ID: 1091019MB1MSD	SampType: MSD	TestCode: 8015_W_GP	Units: mg/L	Prep Date:	RunNo: 114161						
Client ID: ZZZZZ	Batch ID: I09VW0192	TestNo: EPA 8015B(M)		Analysis Date: 10/19/2009	SeqNo: 1807628						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.889	0.050	1.000	0	88.9	69	125	0.8800	1.02	20	
Surr: Bromofluorobenzene (FID)	97.891		100.0		97.9	71	130		0	0	

Sample ID: 1091019MB1	SampType: MBLK	TestCode: 8015_W_GP	Units: mg/L	Prep Date:	RunNo: 114161						
Client ID: PBW	Batch ID: I09VW0192	TestNo: EPA 8015B(M)		Analysis Date: 10/19/2009	SeqNo: 1807629						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	0.050									
Surr: Bromofluorobenzene (FID)	95.577		100.0		95.6	71	130				

Sample ID: 108191-026BDUP	SampType: DUP	TestCode: 8015_W_GP	Units: mg/L	Prep Date:	RunNo: 114161						
Client ID: ZZZZZ	Batch ID: I09VW0192	TestNo: EPA 8015B(M)		Analysis Date: 10/19/2009	SeqNo: 1807631						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	0.050						0	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_GP LL

Sample ID: 108191-026BDUP	SampType: DUP	TestCode: 8015_W_GP	Units: mg/L	Prep Date:	RunNo: 114161						
Client ID: ZZZZZZ	Batch ID: I09VW0192	TestNo: EPA 8015B(M)		Analysis Date: 10/19/2009	SeqNo: 1807631						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	95.536		100.0		95.5	71	130		0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		



*Advanced Technology
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

TestCode: 8021_WP_BTEX

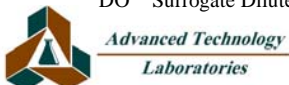
Sample ID: 1091019LCS1		SampType: LCS		TestCode: 8021_WP_BT		Units: µg/L		Prep Date:		RunNo: 114161		
Client ID: LCSW		Batch ID: 109VW0192		TestNo: EPA 8021B				Analysis Date: 10/19/2009		SeqNo: 1807649		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	90.626	0.50	100.0	0	90.6	49	131					
Toluene	92.026	0.50	100.0	0	92.0	64	125					
Ethylbenzene	92.417	0.50	100.0	0	92.4	63	128					
m,p-Xylene	189.691	1.0	200.0	0	94.8	68	122					
o-Xylene	94.206	0.50	100.0	0	94.2	60	124					
Surr: Bromofluorobenzene (PID)	86.843		100.0		86.8	73	127					

Sample ID: 1091019MB1MS		SampType: MS		TestCode: 8021_WP_BT		Units: µg/L		Prep Date:		RunNo: 114161		
Client ID: ZZZZZ		Batch ID: 109VW0192		TestNo: EPA 8021B				Analysis Date: 10/19/2009		SeqNo: 1807650		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	4.948	0.50	7.150	0	69.2	49	131					
Toluene	24.988	0.50	34.45	0	72.5	64	125					
Ethylbenzene	7.047	0.50	9.930	0	71.0	63	128					
m,p-Xylene	31.790	1.0	39.91	0	79.7	68	122					
o-Xylene	11.538	0.50	15.68	0	73.6	60	124					
Surr: Bromofluorobenzene (PID)	85.072		100.0		85.1	73	127					

Sample ID: 1091019MB1MSD		SampType: MSD		TestCode: 8021_WP_BT		Units: µg/L		Prep Date:		RunNo: 114161		
Client ID: ZZZZZ		Batch ID: 109VW0192		TestNo: EPA 8021B				Analysis Date: 10/19/2009		SeqNo: 1807651		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	4.962	0.50	7.150	0	69.4	49	131	4.948	0.283	20		
Toluene	25.738	0.50	34.45	0	74.7	64	125	24.99	2.96	20		
Ethylbenzene	7.195	0.50	9.930	0	72.5	63	128	7.047	2.08	20		
m,p-Xylene	32.210	1.0	39.91	0	80.7	68	122	31.79	1.31	20		
o-Xylene	11.787	0.50	15.68	0	75.2	60	124	11.54	2.14	20		
Surr: Bromofluorobenzene (PID)	85.266		100.0		85.3	73	127		0	0		

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

TestCode: 8021_WP_BTEX

Sample ID: 1091019MB1	SampType: MBLK	TestCode: 8021_WP_BT	Units: µg/L	Prep Date:	RunNo: 114161						
Client ID: PBW	Batch ID: 109VW0192	TestNo: EPA 8021B	Analysis Date: 10/19/2009	SeqNo: 1807652							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

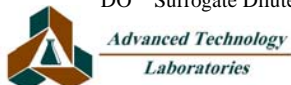
Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Surr: Bromofluorobenzene (PID)	84.788		100.0		84.8	73	127				

Sample ID: 108191-026BDUP	SampType: DUP	TestCode: 8021_WP_BT	Units: µg/L	Prep Date:	RunNo: 114161						
Client ID: ZZZZZZ	Batch ID: 109VW0192	TestNo: EPA 8021B	Analysis Date: 10/19/2009	SeqNo: 1807654							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	ND	0.50						0	0	20	
Toluene	ND	0.50						0	0	20	
Ethylbenzene	ND	0.50						0	0	20	
m,p-Xylene	ND	1.0						0	0	20	
o-Xylene	ND	0.50						0	0	20	
Surr: Bromofluorobenzene (PID)	84.591		100.0		84.6	73	127		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: Q091021LCS1	SampType: LCS	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 114223
Client ID: LCSW	Batch ID: Q09VW203	TestNo: EPA 8260B		Analysis Date: 10/21/2009	SeqNo: 1808751

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20.690	0.50	20.00	0	103	70	130				
Benzene	38.120	0.50	40.00	0	95.3	70	130				
Chlorobenzene	19.380	0.50	20.00	0	96.9	70	130				
MTBE	18.110	0.50	20.00	0	90.6	70	130				
Toluene	38.000	0.50	40.00	0	95.0	70	130				
Trichloroethene	18.680	0.50	20.00	0	93.4	70	130				
Surr: 1,2-Dichloroethane-d4	23.410		25.00		93.6	70	130				
Surr: 4-Bromofluorobenzene	23.670		25.00		94.7	70	130				
Surr: Dibromofluoromethane	23.650		25.00		94.6	70	130				
Surr: Toluene-d8	23.490		25.00		94.0	70	130				

Sample ID: Q091021MB2MS	SampType: MS	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 114223
Client ID: ZZZZZ	Batch ID: Q09VW203	TestNo: EPA 8260B		Analysis Date: 10/21/2009	SeqNo: 1808752

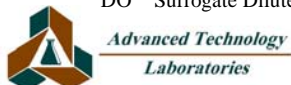
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21.660	0.50	20.00	0	108	70	130				
Benzene	39.850	0.50	40.00	0	99.6	70	130				
Chlorobenzene	20.430	0.50	20.00	0	102	70	130				
Toluene	40.190	0.50	40.00	0	100	70	130				
Trichloroethene	19.010	0.50	20.00	0	95.1	70	130				
Surr: 1,2-Dichloroethane-d4	23.700		25.00		94.8	70	130				
Surr: 4-Bromofluorobenzene	23.210		25.00		92.8	70	130				
Surr: Dibromofluoromethane	23.880		25.00		95.5	70	130				
Surr: Toluene-d8	23.440		25.00		93.8	70	130				

Sample ID: Q091021MB2MSD	SampType: MSD	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 114223
Client ID: ZZZZZ	Batch ID: Q09VW203	TestNo: EPA 8260B		Analysis Date: 10/21/2009	SeqNo: 1808753

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22.940	0.50	20.00	0	115	70	130	21.66	5.74	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

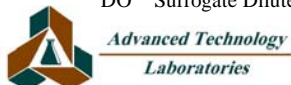
TestCode: 8260_WP_LL

Sample ID: Q091021MB2MSD		SampType: MSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 114223	
Client ID: ZZZZZZ		Batch ID: Q09VW203		TestNo: EPA 8260B		Analysis Date: 10/21/2009		SeqNo: 1808753			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.370	0.50	40.00	0	101	70	130	39.85	1.30	20	
Chlorobenzene	20.810	0.50	20.00	0	104	70	130	20.43	1.84	20	
Toluene	40.840	0.50	40.00	0	102	70	130	40.19	1.60	20	
Trichloroethene	19.520	0.50	20.00	0	97.6	70	130	19.01	2.65	20	
Surr: 1,2-Dichloroethane-d4	23.390		25.00		93.6	70	130		0	20	
Surr: 4-Bromofluorobenzene	23.370		25.00		93.5	70	130		0	20	
Surr: Dibromofluoromethane	23.640		25.00		94.6	70	130		0	20	
Surr: Toluene-d8	22.880		25.00		91.5	70	130		0	20	

Sample ID: Q091021MB2		SampType: MBLK		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 114223	
Client ID: PBW		Batch ID: Q09VW203		TestNo: EPA 8260B		Analysis Date: 10/21/2009		SeqNo: 1808754			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

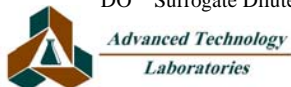
TestCode: 8260_WP_LL

Sample ID: Q091021MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 114223
Client ID: PBW	Batch ID: Q09VW203	TestNo: EPA 8260B		Analysis Date: 10/21/2009	SeqNo: 1808754

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

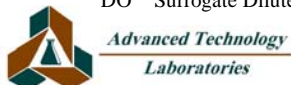
TestCode: 8260_WP_LL

Sample ID: Q091021MB2		SampType: MBLK		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 114223			
Client ID: PBW		Batch ID: Q09VW203		TestNo: EPA 8260B		Analysis Date: 10/21/2009		SeqNo: 1808754			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	23.490		25.00		94.0	70	130				
Surr: 4-Bromofluorobenzene	22.090		25.00		88.4	70	130				
Surr: Dibromofluoromethane	23.320		25.00		93.3	70	130				
Surr: Toluene-d8	24.120		25.00		96.5	70	130				

Sample ID: 108197-001A		SampType: DUP		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 114223			
Client ID: CPT-2 (24'-28')		Batch ID: Q09VW203		TestNo: EPA 8260B		Analysis Date: 10/21/2009		SeqNo: 1810778			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50						0	0	20	
1,1,1-Trichloroethane	ND	0.50						0	0	20	
1,1,2,2-Tetrachloroethane	ND	0.50						0	0	20	
1,1,2-Trichloroethane	ND	0.50						0	0	20	
1,1-Dichloroethane	ND	0.50						0	0	20	
1,1-Dichloroethene	ND	0.50						0	0	20	
1,1-Dichloropropene	ND	0.50						0	0	20	
1,2,3-Trichlorobenzene	ND	0.50						0	0	20	
1,2,3-Trichloropropane	ND	0.50						0	0	20	
1,2,4-Trichlorobenzene	ND	0.50						0	0	20	
1,2,4-Trimethylbenzene	ND	0.50						0	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

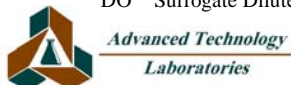
ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: 108197-001A		SampType: DUP		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 114223			
Client ID: CPT-2 (24'-28')		Batch ID: Q09VW203		TestNo: EPA 8260B		Analysis Date: 10/21/2009		SeqNo: 1810778			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	0.50						0	0	20	
1,2-Dibromoethane	ND	0.50						0	0	20	
1,2-Dichlorobenzene	ND	0.50						0	0	20	
1,2-Dichloroethane	ND	0.50						0	0	20	
1,2-Dichloropropane	ND	0.50						0	0	20	
1,3,5-Trimethylbenzene	ND	0.50						0	0	20	
1,3-Dichlorobenzene	ND	0.50						0	0	20	
1,3-Dichloropropane	ND	0.50						0	0	20	
1,4-Dichlorobenzene	ND	0.50						0	0	20	
2,2-Dichloropropane	ND	0.50						0	0	20	
2-Chlorotoluene	ND	0.50						0	0	20	
4-Chlorotoluene	ND	0.50						0	0	20	
4-Isopropyltoluene	ND	0.50						0	0	20	
Benzene	ND	0.50						0	0	20	
Bromobenzene	ND	0.50						0	0	20	
Bromodichloromethane	ND	0.50						0	0	20	
Bromoform	ND	0.50						0	0	20	
Bromomethane	ND	0.50						0	0	20	
Carbon tetrachloride	ND	0.50						0	0	20	
Chlorobenzene	ND	0.50						0	0	20	
Chloroethane	ND	0.50						0	0	20	
Chloroform	ND	0.50						0	0	20	
Chloromethane	ND	0.50						0	0	20	
cis-1,2-Dichloroethene	ND	0.50						0	0	20	
cis-1,3-Dichloropropene	ND	0.50						0	0	20	
Dibromochloromethane	ND	0.50						0	0	20	
Dibromomethane	ND	0.50						0	0	20	
Dichlorodifluoromethane	ND	0.50						0	0	20	
Ethylbenzene	ND	0.50						0	0	20	
Hexachlorobutadiene	ND	0.50						0	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

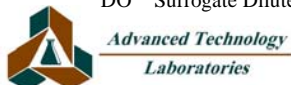
ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: 108197-001A		SampType: DUP		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 114223			
Client ID: CPT-2 (24'-28')		Batch ID: Q09VW203		TestNo: EPA 8260B		Analysis Date: 10/21/2009		SeqNo: 1810778			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	ND	0.50						0	0	20	
m,p-Xylene	ND	1.0						0	0	20	
Methylene chloride	ND	1.0						0	0	20	
n-Butylbenzene	ND	0.50						0	0	20	
n-Propylbenzene	ND	0.50						0	0	20	
Naphthalene	ND	0.50						0	0	20	
o-Xylene	ND	0.50						0	0	20	
sec-Butylbenzene	ND	0.50						0	0	20	
Styrene	ND	0.50						0	0	20	
tert-Butylbenzene	ND	0.50						0	0	20	
Tetrachloroethene	ND	0.50						0	0	20	
Toluene	ND	0.50						0	0	20	
trans-1,2-Dichloroethene	ND	0.50						0	0	20	
Trichloroethene	ND	0.50						0	0	20	
Trichlorofluoromethane	ND	0.50						0	0	20	
Vinyl chloride	ND	0.50						0	0	20	
Surr: 1,2-Dichloroethane-d4	25.660		25.00		103	70	130		0	0	
Surr: 4-Bromofluorobenzene	23.200		25.00		92.8	70	130		0	0	
Surr: Dibromofluoromethane	25.760		25.00		103	70	130		0	0	
Surr: Toluene-d8	26.160		25.00		105	70	130		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: Q091022LCS1	SampType: LCS	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 114332						
Client ID: LCSW	Batch ID: Q09VW205	TestNo: EPA 8260B		Analysis Date: 10/22/2009	SeqNo: 1811198						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	22.290	0.50	20.00	0	111	70	130				
Benzene	40.910	0.50	40.00	0	102	70	130				
Chlorobenzene	20.730	0.50	20.00	0	104	70	130				
MTBE	20.350	0.50	20.00	0	102	70	130				
Toluene	41.500	0.50	40.00	0	104	70	130				
Trichloroethene	19.650	0.50	20.00	0	98.2	70	130				
Surr: 1,2-Dichloroethane-d4	24.100		25.00		96.4	70	130				
Surr: 4-Bromofluorobenzene	23.820		25.00		95.3	70	130				
Surr: Dibromofluoromethane	24.240		25.00		97.0	70	130				
Surr: Toluene-d8	24.210		25.00		96.8	70	130				

Sample ID: Q091022MB2MS	SampType: MS	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 114332						
Client ID: ZZZZZ	Batch ID: Q09VW205	TestNo: EPA 8260B		Analysis Date: 10/22/2009	SeqNo: 1811198						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

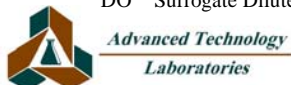
1,1-Dichloroethene	22.060	0.50	20.00	0	110	70	130				
Benzene	40.700	0.50	40.00	0	102	70	130				
Chlorobenzene	20.530	0.50	20.00	0	103	70	130				
Toluene	40.600	0.50	40.00	0	102	70	130				
Trichloroethene	19.470	0.50	20.00	0	97.4	70	130				
Surr: 1,2-Dichloroethane-d4	23.790		25.00		95.2	70	130				
Surr: 4-Bromofluorobenzene	23.210		25.00		92.8	70	130				
Surr: Dibromofluoromethane	23.760		25.00		95.0	70	130				
Surr: Toluene-d8	23.180		25.00		92.7	70	130				

Sample ID: Q091022MB2MSD	SampType: MSD	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 114332						
Client ID: ZZZZZ	Batch ID: Q09VW205	TestNo: EPA 8260B		Analysis Date: 10/22/2009	SeqNo: 1811199						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	21.180	0.50	20.00	0	106	70	130	22.06	4.07	20	
--------------------	--------	------	-------	---	-----	----	-----	-------	------	----	--

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

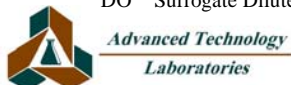
TestCode: 8260_WP_LL

Sample ID: Q091022MB2MSD		SampType: MSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 114332	
Client ID: ZZZZZ		Batch ID: Q09VW205		TestNo: EPA 8260B		Analysis Date: 10/22/2009		SeqNo: 1811199			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.190	0.50	40.00	0	98.0	70	130	40.70	3.78	20	
Chlorobenzene	19.870	0.50	20.00	0	99.4	70	130	20.53	3.27	20	
Toluene	39.180	0.50	40.00	0	98.0	70	130	40.60	3.56	20	
Trichloroethene	19.050	0.50	20.00	0	95.2	70	130	19.47	2.18	20	
Surr: 1,2-Dichloroethane-d4	24.530		25.00		98.1	70	130		0	20	
Surr: 4-Bromofluorobenzene	25.380		25.00		102	70	130		0	20	
Surr: Dibromofluoromethane	25.010		25.00		100	70	130		0	20	
Surr: Toluene-d8	25.560		25.00		102	70	130		0	20	

Sample ID: Q091022MB2		SampType: MBLK		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 114332	
Client ID: PBW		Batch ID: Q09VW205		TestNo: EPA 8260B		Analysis Date: 10/22/2009		SeqNo: 1811200			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

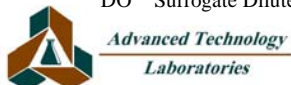
TestCode: 8260_WP_LL

Sample ID: Q091022MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 114332
Client ID: PBW	Batch ID: Q09VW205	TestNo: EPA 8260B		Analysis Date: 10/22/2009	SeqNo: 1811200

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

ANALYTICAL QC SUMMARY REPORT

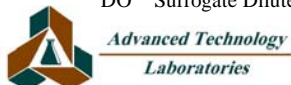
TestCode: 8260_WP_LL

Sample ID: Q091022MB2		SampType: MBLK		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 114332			
Client ID: PBW		Batch ID: Q09VW205		TestNo: EPA 8260B		Analysis Date: 10/22/2009		SeqNo: 1811202			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	21.910		25.00		87.6	70	130				
Surr: 4-Bromofluorobenzene	31.470		25.00		126	70	130				
Surr: Dibromofluoromethane	22.470		25.00		89.9	70	130				
Surr: Toluene-d8	23.590		25.00		94.4	70	130				

Sample ID: 108197-003A		SampType: DUP		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 114332			
Client ID: CPT-3 (10'-14')		Batch ID: Q09VW205		TestNo: EPA 8260B		Analysis Date: 10/22/2009		SeqNo: 1811202			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50						0	0	20	
1,1,1-Trichloroethane	ND	0.50						0	0	20	
1,1,2,2-Tetrachloroethane	ND	0.50						0	0	20	
1,1,2-Trichloroethane	ND	0.50						0	0	20	
1,1-Dichloroethane	0.340	0.50						0.2900	0	20	
1,1-Dichloroethene	ND	0.50						0	0	20	
1,1-Dichloropropene	ND	0.50						0	0	20	
1,2,3-Trichlorobenzene	ND	0.50						0	0	20	
1,2,3-Trichloropropane	ND	0.50						0	0	20	
1,2,4-Trichlorobenzene	ND	0.50						0	0	20	
1,2,4-Trimethylbenzene	ND	0.50						0	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

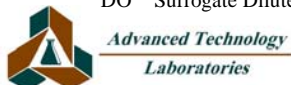
ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: 108197-003A		SampType: DUP		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 114332			
Client ID: CPT-3 (10'-14')		Batch ID: Q09VW205		TestNo: EPA 8260B		Analysis Date: 10/22/2009		SeqNo: 1811202			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	0.50						0	0	20	
1,2-Dibromoethane	ND	0.50						0	0	20	
1,2-Dichlorobenzene	ND	0.50						0	0	20	
1,2-Dichloroethane	ND	0.50						0	0	20	
1,2-Dichloropropane	ND	0.50						0	0	20	
1,3,5-Trimethylbenzene	ND	0.50						0	0	20	
1,3-Dichlorobenzene	ND	0.50						0	0	20	
1,3-Dichloropropane	ND	0.50						0	0	20	
1,4-Dichlorobenzene	ND	0.50						0	0	20	
2,2-Dichloropropane	ND	0.50						0	0	20	
2-Chlorotoluene	ND	0.50						0	0	20	
4-Chlorotoluene	ND	0.50						0	0	20	
4-Isopropyltoluene	ND	0.50						0	0	20	
Benzene	ND	0.50						0	0	20	
Bromobenzene	ND	0.50						0	0	20	
Bromodichloromethane	ND	0.50						0	0	20	
Bromoform	ND	0.50						0	0	20	
Bromomethane	ND	0.50						0	0	20	
Carbon tetrachloride	ND	0.50						0	0	20	
Chlorobenzene	ND	0.50						0	0	20	
Chloroethane	ND	0.50						0	0	20	
Chloroform	ND	0.50						0	0	20	
Chloromethane	ND	0.50						0	0	20	
cis-1,2-Dichloroethene	ND	0.50						0	0	20	
cis-1,3-Dichloropropene	ND	0.50						0	0	20	
Dibromochloromethane	ND	0.50						0	0	20	
Dibromomethane	ND	0.50						0	0	20	
Dichlorodifluoromethane	ND	0.50						0	0	20	
Ethylbenzene	ND	0.50						0	0	20	
Hexachlorobutadiene	ND	0.50						0	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Geocon Consultants, Inc.
Work Order: 108197
Project: Caltrans I-580, E8415-06-62

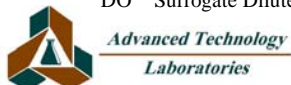
ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: 108197-003A		SampType: DUP		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 114332			
Client ID: CPT-3 (10'-14')		Batch ID: Q09VW205		TestNo: EPA 8260B		Analysis Date: 10/22/2009		SeqNo: 1811202			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	ND	0.50						0	0	20	
m,p-Xylene	ND	1.0						0	0	20	
Methylene chloride	ND	1.0						0	0	20	
n-Butylbenzene	ND	0.50						0	0	20	
n-Propylbenzene	ND	0.50						0	0	20	
Naphthalene	ND	0.50						0	0	20	
o-Xylene	ND	0.50						0	0	20	
sec-Butylbenzene	ND	0.50						0	0	20	
Styrene	ND	0.50						0	0	20	
tert-Butylbenzene	ND	0.50						0	0	20	
Tetrachloroethene	ND	0.50						0	0	20	
Toluene	ND	0.50						0	0	20	
trans-1,2-Dichloroethene	ND	0.50						0	0	20	
Trichloroethene	ND	0.50						0	0	20	
Trichlorofluoromethane	ND	0.50						0	0	20	
Vinyl chloride	ND	0.50						0	0	20	
Surr: 1,2-Dichloroethane-d4	24.310		25.00		97.2	70	130		0	0	
Surr: 4-Bromofluorobenzene	22.160		25.00		88.6	70	130		0	0	
Surr: Dibromofluoromethane	24.050		25.00		96.2	70	130		0	0	
Surr: Toluene-d8	23.740		25.00		95.0	70	130		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CHAIN OF CUSTODY RECORD



**Advanced Technology
Laboratories**

3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____
Logged By: _____ Date: 10/17/09

Method of Transport
Client
ATL
CA OverN
FEDEX
Other: G150

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

Client: <u>Gecon Consultants</u>	Address: <u>6671 Brisa St.</u>	TEL: (<u>925</u>) <u>371-5900</u>
Attn: <u>John Love</u>	City <u>Livermore</u> State <u>CA</u> Zip Code <u>94550</u>	FAX: (<u>925</u>) <u>371-5915</u>
Project Name: <u>Caltrans I-580</u>	Project #: <u>E8415-06-62</u>	Sampler: (Printed Name) <u>John Love</u> (Signature) <u>[Signature]</u>
Relinquished by: (Signature and Printed Name) <u>[Signature] John Love</u>	Date: <u>10/16/09</u> Time: <u>16:00</u>	Received by: (Signature and Printed Name) <u>[Signature]</u> Date: <u>10/17/09</u> Time: <u>9:00</u>
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: <u>John Love</u> <u>10/16/09</u> <u>[Signature]</u> Print Name Date Signature	Send Report To: Attn: _____ Co: <u>same as above</u> Address _____ City _____ State _____ Zip _____	Bill To: Attn: _____ Co: <u>same as above</u> Address _____ City _____ State _____ Zip _____
Special Instructions/Comments: <u>EDX 17-DCA</u>		

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
• Sample : \$2.00 / sample / mo (after 45 days)
• Records : \$1.00 / ATL workorder / mo (after 1 year)

LAB USE ONLY: Batch #: Lab No.		Sample Description Sample I.D. / Location Date Time		Circle or Add Analysis(es) Requested	SPECIFY APPROPRIATE MATRIX												Container(s) # Type	PRESERVATION	REMARKS																				
					MATRIX																																		
I T E M																		Q A / Q C RTNE <input type="checkbox"/> CT <input type="checkbox"/> SWRCB <input type="checkbox"/> Logcode _____ OTHER _____																					
				8091A (Pesticides)	8092 (PCB)	8209 (Nitriles)	8270C (BNA)	8010B (Total Metal)	8015B (GRO) / 8020 (BTEX)	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT																						
	<u>108197-01</u>	<u>CPT-2 (24'-28')</u>	<u>10/15/09</u>	<u>11:45</u>	X			X							X																								
	<u>2</u>	<u>CPT-2 (41'-45')</u>		<u>12:15</u>	X			X																															
	<u>3</u>	<u>CPT-3 (10'-14')</u>		<u>14:30</u>	X			X																															
	<u>4</u>	<u>CPT-3 (25'-29')</u>		<u>14:45</u>	X			X																															
	<u>5</u>	<u>CPT-3 (45'-49')</u>		<u>15:00</u>	X			X																															

• TAT starts 8 a.m. following day if samples received after 3 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=Na₂S₂O₃

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

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

CHAIN OF CUSTODY RECORD



**Advanced Technology
Laboratories**

3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____

Method of Transport

- Client
- ATL
- CA OverN
- FEDEX
- Other: _____

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: Geocon Consultants Address: 6671 Brisk St. TEL: (925) 371-5900
 Attn: John Low City Livermore State CA Zip Code 94550 FAX: (925) 371-5915

Project Name: Caltrans I-580 Project #: E8415-06-62 Sampler: John Low (Printed Name) _____ (Signature) _____

Relinquished by: _____ (Signature and Printed Name)	Date: <u>10/16/09</u>	Time: <u>16:00</u>	Received by: _____ (Signature and Printed Name)	Date: <u>10/17/09</u>	Time: <u>9:00</u>
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: <u>John Low</u> <u>10/16/09</u> Print Name Date _____ Signature	Send Report To: Attn: _____ Co: <u>same as above</u> Address _____ City _____ State _____ Zip _____	Bill To: Attn: _____ Co: <u>same as above</u> Address _____ City _____ State _____ Zip _____	Special Instructions/Comments: _____
--	---	--	---

Sample/Records - Archival & Disposal
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):

- Sample : \$2.00 / sample / mo (after 45 days)
- Records : \$1.00 / ATL workorder / mo (after 1 year)

ITEM	LAB USE ONLY:		Sample Description		
	Batch #:	Lab No.	Sample I.D. / Location	Date	Time
		<u>108197 - 6</u>	<u>CPT-1 (22'-26')</u>	<u>10/16/09</u>	<u>1:55</u>

Circle or Add Analysis(es) Requested	SPECIFY APPROPRIATE MATRIX			PRESERVATION	QA/QC
	SOIL	WATER	GROUND WATER / WASTEWATER		
TAT	#	Type	OTHER _____	REMARKS	
8081A (Pesticides) 8082 (PCB) 8280Z (Volatiles) 8270C (BVA) 80109 (Total Metal) 80158 (GRO) / 8020 (BTX) + EDB 80158 (DRO) 8021 (BTX) TITLE 22 / CAM 17 (6010 / 7000)	SOIL WATER GROUND WATER WASTEWATER	Container(s)	SWRCB <input type="checkbox"/> Logcode _____		
X X	X	E 4 V G H	_____		

• TAT starts 8 a.m. following day if samples received after 3 p.m.

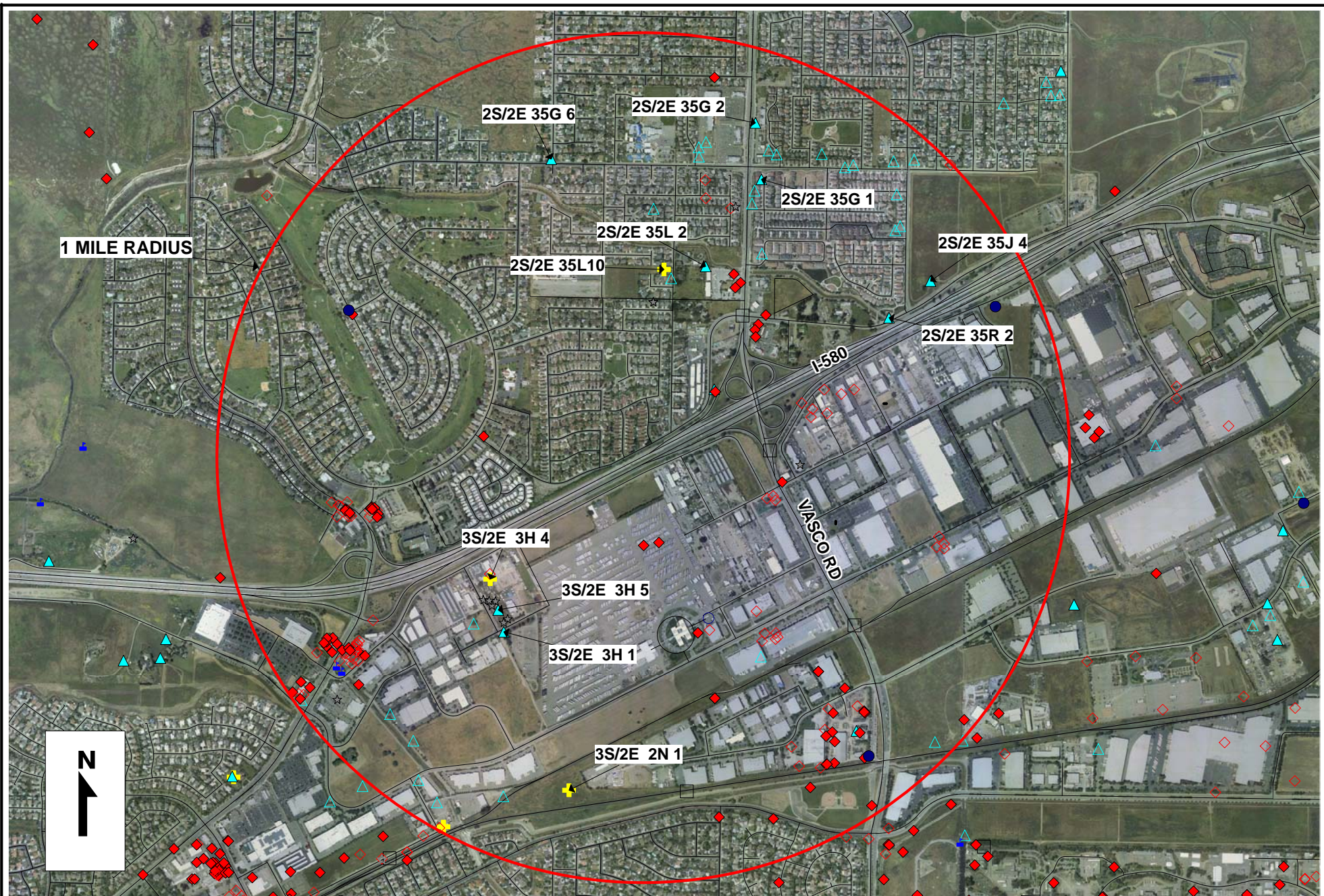
TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

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

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

APPENDIX





1 MILE RADIUS

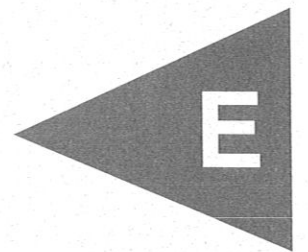


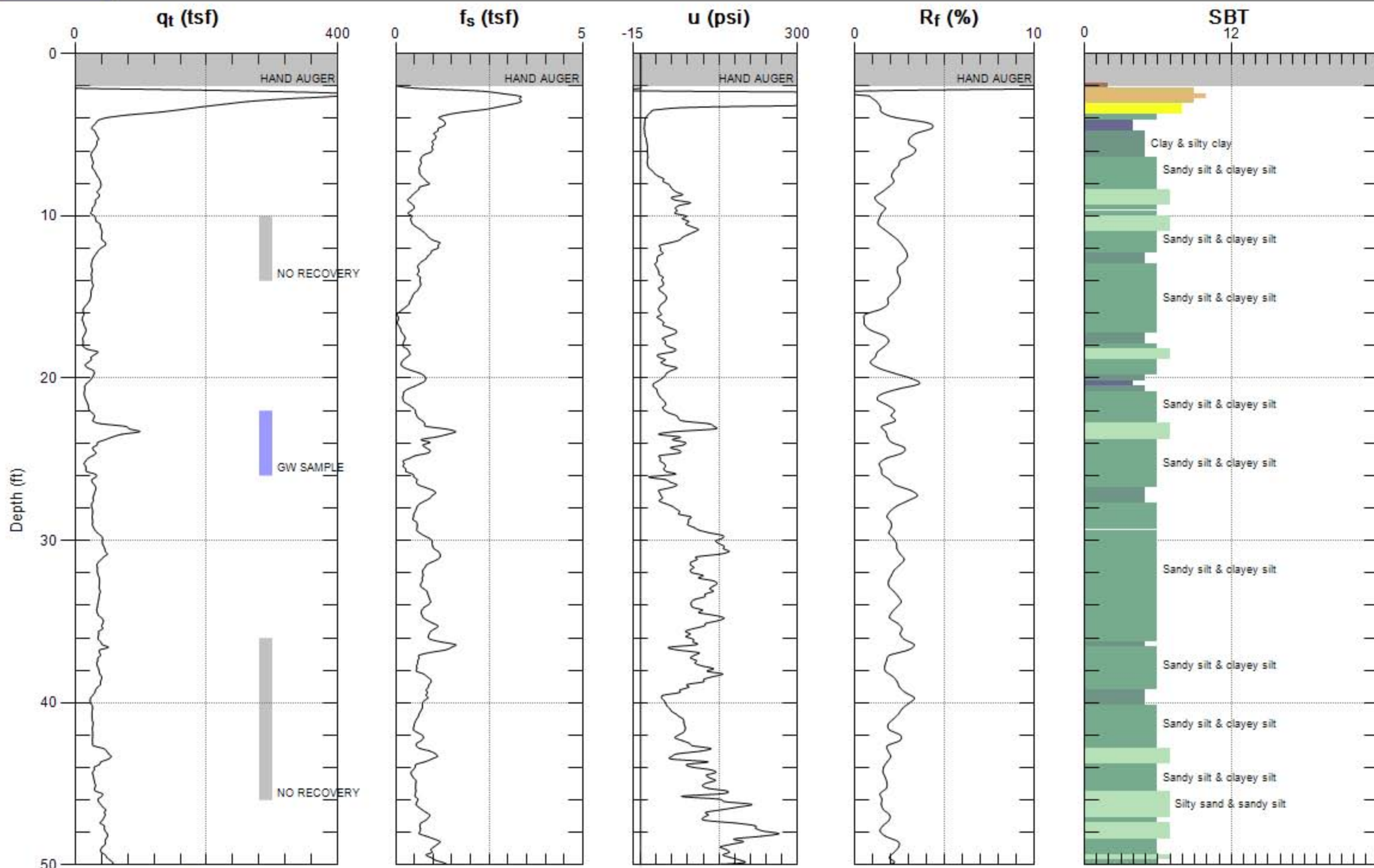
ZONE 7 WATER AGENCY
100 NORTH CANYONS PARKWAY
FREMONT, CA 94551

WELL LOCATION MAP

SCALE: 1" = 1600 ft
DATE: 10/29/09
I-580 & VASCO RD

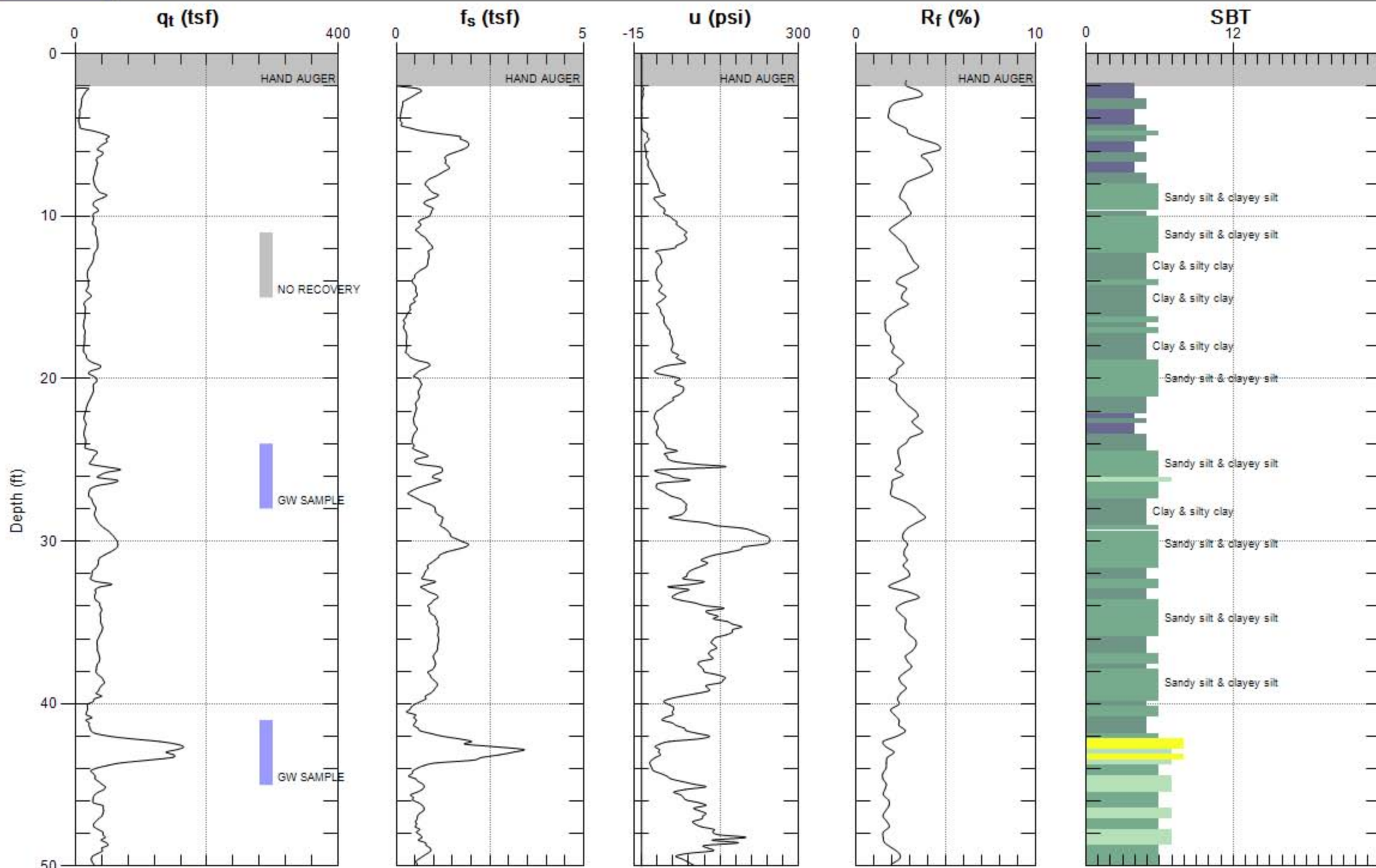
APPENDIX





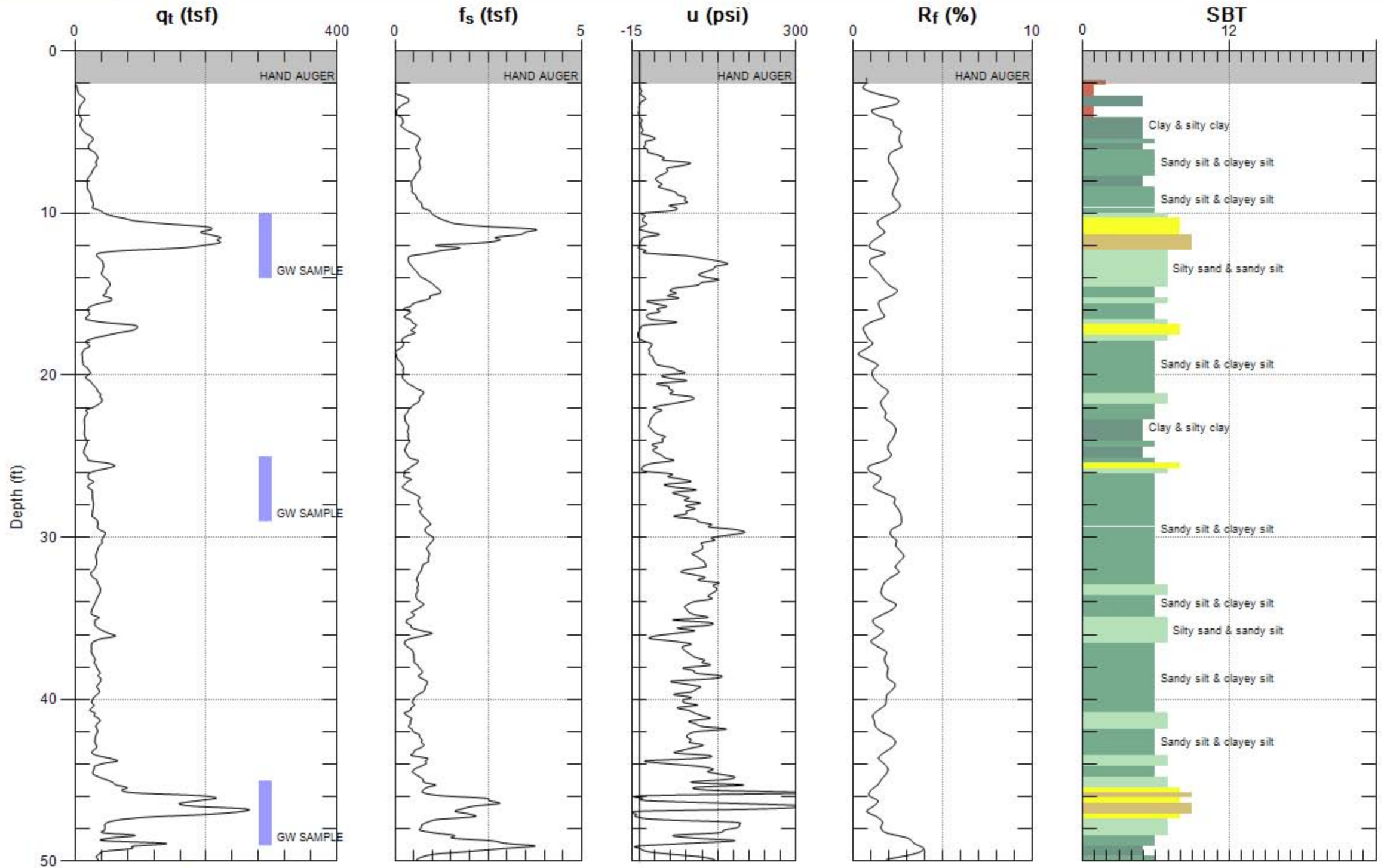
Max. Depth: 50.361 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)



Max. Depth: 50.197 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)



Max. Depth: 50.197 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX



F

February 16, 2010

Mr. John Love
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
Fax (925)371-5915

Subject: Limited Groundwater Investigation Report
Eastbound and Westbound Interstate 580
Between First Street and Vasco Road in Livermore, California

Dear Mr. Love:

I have reviewed and approved the above referenced document. Please submit it to the Alameda County Health Care Services Agency (ACHCSA). Should the ACHCSA require, I declare under the penalty of perjury, that to the best of my knowledge, the information contained in the attached workplan is true and correct.

If you have any questions, or need additional information, please give me a call at (510) 286-6022

Sincerely,



Chris Bledsoe
Transportation Engineer
Office of Construction Environmental Engineering Support