



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

May 11, 2010

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 – Case Closure

Dear Mr. Bledsoe:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (<http://geotracker.swrcb.ca.gov>) and the Alameda County Environmental Health website (<http://www.acgov.org/aceh/index.htm>).

#### SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Total Petroleum Hydrocarbons as gasoline remain in soil at concentrations up to 1,500 ppm.
- Total Petroleum Hydrocarbons as diesel remain in soil at concentrations up to 700 ppm.

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Donna L. Drogos".

Donna L. Drogos, P.E.  
Chief

Enclosures:

1. Remedial Action Completion Certification
2. Case Closure Summary

cc:

Cheryl Dizon, QIC 80201 (w/enc)  
Zone 7 Water Agency  
100 North Canyons Parkway  
Livermore, CA 94551  
(Sent via E-mail to: [cdizon@zone7water.com](mailto:cdizon@zone7water.com))

Closure Unit (w/enc)  
State Water Resources Control Board  
UST Cleanup Fund  
P.O. Box 944212  
Sacramento, CA 94244-2120

Danielle Stefani (w/enc)  
Livermore-Pleasanton Fire Department  
3560 Nevada Street,  
Pleasanton, CA 94566  
(Sent via E-mail to: [dstefani@lpfire.org](mailto:dstefani@lpfire.org))

City of Livermore Planning Department (w/enc),  
1052 South Livermore Avenue,  
Livermore, CA 94550

John Love (w/enc)  
Geocon Environmental Consultants  
6671 Brisa Street  
Livermore, CA 94550  
(Sent via E-mail to: [love@geoconinc.com](mailto:love@geoconinc.com))

Donna Drogos, ACEH (Sent via E-mail to: [donna.drogos@acgov.org](mailto:donna.drogos@acgov.org))  
Jerry Wickham, ACEH (w/o enc)

Geotracker (w/enc)  
File (w/orig enc)



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**REMEDIAL ACTION COMPLETION CERTIFICATION**

May 11, 2010

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 – Case Closure

Dear Mr. Bledsoe:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25296.10 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Ariu Levi", written over a horizontal line.

Ariu Levi  
Director  
Alameda County Environmental Health

**CASE CLOSURE SUMMARY  
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

**I. AGENCY INFORMATION**

Date: April 19, 2010

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Mr. Jerry Wickham	Title: Senior Hazardous Materials Specialist

**II. CASE INFORMATION**

Site Facility Name: Caltrans I-580 EB Shoulder		
Site Facility Address: I-580 Freeway, Livermore, CA 94550		
RB Case No.: ---	Local Case No.: ---	LOP Case No.: RO0003000
URF Filing Dates: 04/23/2009	Geotracker ID: T10000001071	APN: ---

Responsible Parties	Addresses	Phone Numbers
Chris Bledsoe, Caltrans	111 Grand Avenue, Oakland, CA 94612	(510) 286-6022
---	---	---
---	---	---

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	600	Gasoline/Diesel	Removed	04/03/2009
2 through 4	250	Gasoline/Diesel	Removed	04/03/2009
---	---	---	---	---
---	---	---	---	---
Piping			Removed	04/03/2009

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and Type of Release: Unknown. However, several holes were observed in two of the tanks during removal.		
Site characterization complete? Yes	Date Approved By Oversight Agency: ----	
Monitoring wells installed? No	Number: 0	Proper screened interval? ---
Highest GW Depth Below Ground Surface: 12 feet bgs	Lowest Depth: 24 feet bgs	Flow Direction: West to Northwest
Most Sensitive Current Use: Drinking water source.		

Summary of Production Wells in Vicinity: The nearest water supply wells are 2S/2E 35L10 and 2S/2E 35L2, which are located more than 2,000 feet north of the site. Based on the crossgradient location, distance from the site, and limited extent of groundwater contamination, the wells are not expected to be receptors for the site. No other water supply wells are located within 1/2-mile of the site.	
Are drinking water wells affected? No	Aquifer Name: Mocho II Subbasin of Livermore-Amador Groundwater Basin
Is surface water affected? No	Nearest SW Name: Arroyo Seco is approximately 5,000 feet southwest of the site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and Livermore-Pleasanton Fire Department.

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	4 tanks	The tanks were transported to West Coast Equipment in Turlock, CA for recycling.	04/03/2009
Piping	Not reported	Not reported; assumed disposed with tanks	04/03/2009
Free Product	----	----	----
Soil	270 tons	The soil was transported to Altamont Class II Landfill in Livermore, CA for disposal.	04/09/2009
Groundwater	----	----	----

**MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP**  
 (Please see Attachments 1-6 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	1,500	1,500	<50	<50
TPH (Diesel)	700	700	130	130
TPH (Motor Oil)	14	14	Not analyzed	Not analyzed
Benzene	<0.0050	<0.0050	<0.5	<0.5
Toluene	<0.0050	<0.0050	<0.5	<0.5
Ethylbenzene	1.9	1.9	<0.5	<0.5
Xylenes	2.7	2.7	<1.5	<1.5
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	9.9(1)	9.9(1)	Not analyzed	Not analyzed
MTBE	Not analyzed(2)	Not analyzed(2)	<25(3)	<25(3)
Other (8240/8270)	Not analyzed	Not analyzed	1.1(4)	1.1(4)

Footnotes:

- (1) Lead = 9.9 ppm; nickel = 46 ppm; chromium = 49 ppm; zinc = 70 ppm; and cadmium <1.5 ppm.
- (2) Fuel oxygenates were not detected in water samples collected from inside the tanks. Based on the absence of fuel oxygenates in water samples from the tanks and age of tanks, fuel oxygenates were not analyzed in soil samples from the tank excavation.
- (3) MTBE <25 ppb; TBA <100 ppb; TAME, DIPE, and ETBE <25 ppb; EDB and EDC <0.5 ppb.
- (4) 1,1-Dichloroethane = 1.1 ppb; no other VOCs detected at various reporting limits.

#### Site History and Description of Corrective Actions:

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. The site is now beneath the eastbound Vasco Road off ramp approximately 1,350 feet west of Vasco Road. The USTs were removed prior to the freeway expansion.

On April 3, 2009, four USTs were discovered beneath the existing shoulder area of eastbound I-580 (south side of the freeway) during the HOV lane construction project. The USTs consisted of three 250-gallon tanks and one 600-gallon tank. Each of the USTs was full of water, which was pumped out with a vacuum truck. During the UST removal activities, stained soils were visible and a noticeable petroleum odor was present. Impacted soils were over-excavated with a backhoe; however, the reach of the backhoe bucket was only 12 feet and obvious soil staining was still present at that depth.

On April 4, 2009, 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). 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, the stability of the excavation became a safety concern. Therefore, the excavation was terminated. 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 ppm and 360 ppm, respectively; and the samples collected from the bottom of the excavation towards the eastern portion of the pit contained 1,500 ppm TPHg and 700 ppm 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 ppm to 2.7 ppm.

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.

In order to assess potential impacts to groundwater, one cone penetrometer test (CPT) boring was advanced near the former USTs and two CPT borings were advanced downgradient from the USTs to collect depth-discrete grab groundwater samples. 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 in two groundwater samples collected from downgradient boring CPT-2. In grab groundwater samples from CPT-2, TPHd was reported at a concentration of 73 ppb in the 24- to 28-foot interval sample, and it was reported at a concentration of 130 ppb in the 41- to 45-foot interval sample. 1,1-dichloroethane 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 at concentrations ranging from 0.56 to 1.1 ppb. Based on these results, it appears that impacts to groundwater are limited to the area beneath Interstate 580 and that the concentrations of fuel hydrocarbons in groundwater are near or below the San Francisco Bay Regional Water Quality Control Board's Tier 1 Environmental Screening Levels for groundwater that is a current or potential drinking water source (May 2008).

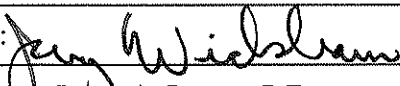
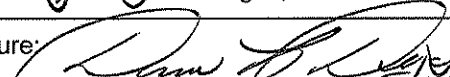
**IV. CLOSURE**

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: Case closure for this fuel leak site is granted for the current public road way use only. If a change in land use to any residential, commercial, or other conservative land use scenario occurs at this site, Alameda County Environmental Health (ACEH) must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the case upon receipt of approved development/construction plans.		
Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.		
Should corrective action be reviewed if land use changes? Yes.		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: NA	Number Decommissioned: 0	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: --		

**V. ADDITIONAL COMMENTS, DATA, ETC.**

<p>Considerations and/or Variances:</p> <p>None.</p> <p>Conclusion:</p> <p>Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment under the current public land use as a roadway based upon the information available in our files to date. No further investigation or cleanup for the fuel leak case is necessary at this time. However, as specified in the Site Management Requirements, re-evaluation of this case may be required if land uses changes to any residential or other conservative land use scenario; or construction or excavation activities take place. ACEH staff recommend closure for this site.</p>
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**VI. LOCAL AGENCY REPRESENTATIVE DATA**

Prepared by: Jerry Wickham	Title: Senior Hazardous Materials Specialist
Signature: 	Date: 05/05/10
Approved by: Dohra L. Drogos, P.E.	Title: Chief
Signature: 	Date: 05/05/10

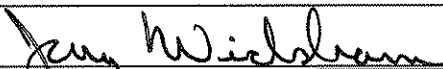
This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.



**VII. REGIONAL BOARD NOTIFICATION**

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Notification Date: 05/05/10	

**VIII. MONITORING WELL DECOMMISSIONING**

Date Requested by ACEH: NA	Date of Well Decommissioning Report: NA	
All Monitoring Wells Decommissioned: NA	Number Decommissioned: NA	Number Retained: NA
Reason Wells Retained: No monitoring wells installed		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: 	Date: 05/11/10	

Attachments:

1. Site Vicinity Map (1 p)
2. Sample Location Map (1 p)
3. Excavation Sample Location Map (1 p)
4. Soil Analytical Data (2 pp)
5. Groundwater Analytical Data (1 p)
6. Boring Logs (3 pp)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

## Wickham, Jerry, Env. Health

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**From:** Cherie McCaulou [CMccaulou@waterboards.ca.gov]  
**Sent:** Tuesday, May 11, 2010 12:20 PM  
**To:** Wickham, Jerry, Env. Health  
**Subject:** Re: Notification of case closure for RO3000

Jerry - Thanks for the notification. We have no objection to ACEH's recommendation for case closure of RO3000.

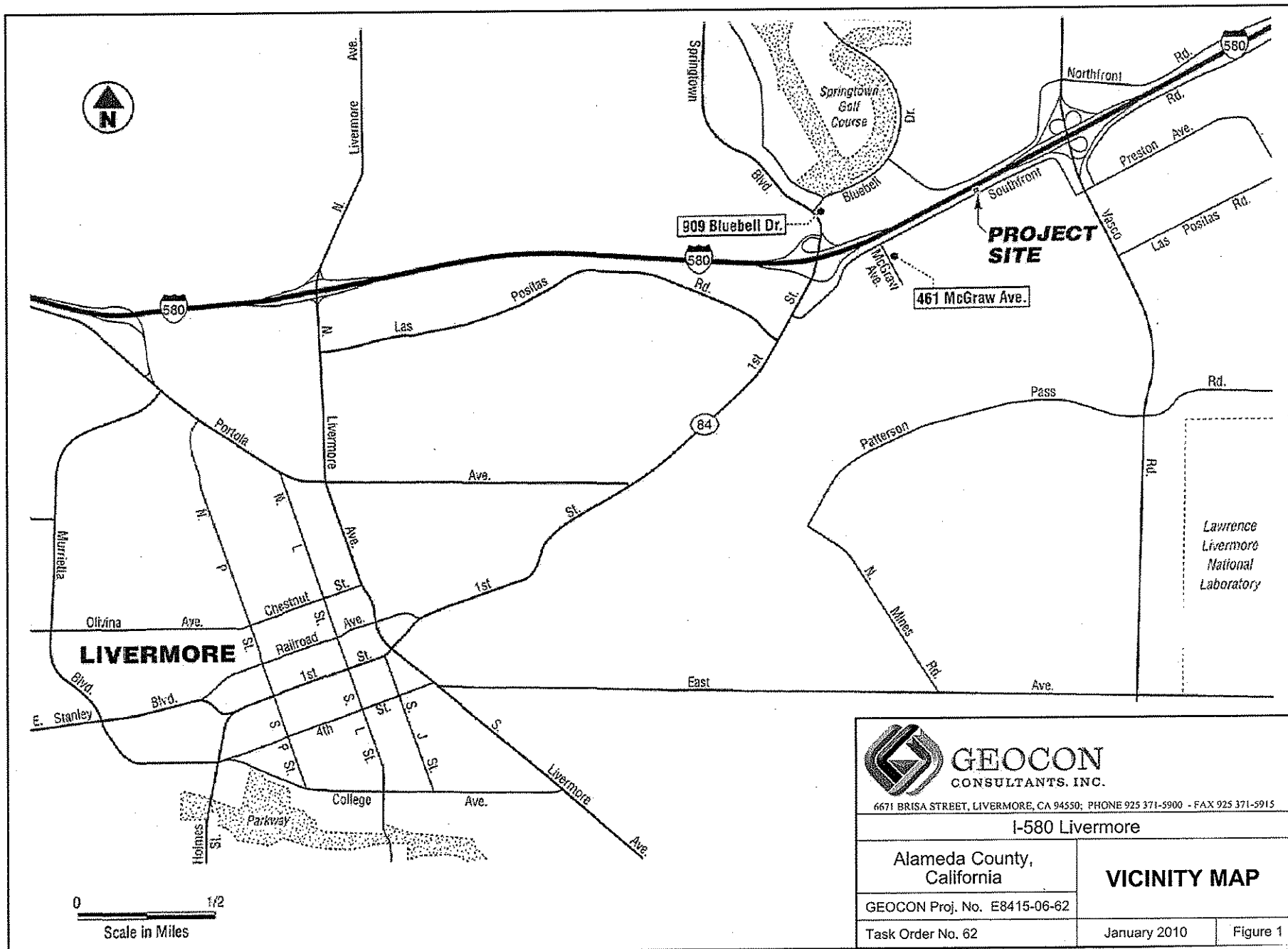
Sincerely,


Cherie McCaulou  
Engineering Geologist  
San Francisco Bay Regional Water Quality Control Board [cmccaulou@waterboards.ca.gov](mailto:cmccaulou@waterboards.ca.gov)  
510-622-2342

>>> "Wickham, Jerry, Env. Health" <[jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org)> 5/5/2010  
>>> 2:56 PM >>>  
Hi Cherie,

This is notification that case closure is pending for case RO3000 (Geotracker Global ID T10000001071), I-580 Freeway, Livermore, CA.

Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502  
510-567-6791  
[jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org)

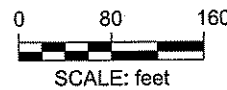


 <b>GEOCON</b> CONSULTANTS, INC. <small>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</small>	
I-580 Livermore	
Alameda County, California	<b>VICINITY MAP</b>
GEOCON Proj. No. E8415-06-62	
Task Order No. 62	January 2010
	Figure 1



**LEGEND:**

● Proposed Sample Location



**GEOCON**  
CONSULTANTS, INC.

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

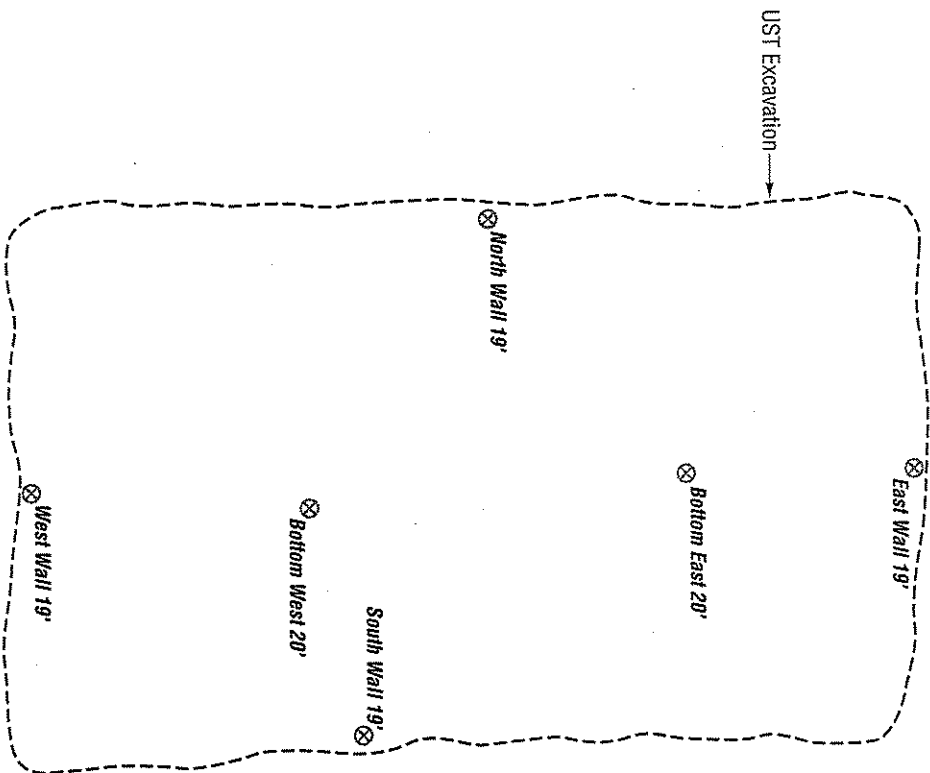
Task Order No. 62

January 2010

Figure 2



INTERSTATE 580



LEGEND:  
⊗ Approximate Excavation Sample Location



**GEOCON**  
CONSULTANTS, INC.

8871 BRISA STREET - LIVERMORE, CA 94550  
PHONE 925.371.5900 - FAX 925.371.5915

I-580 Livermore

Alameda County,  
California

GEOCON Proj. No. E8415-06-62

Task Order No. 62

**Excavation Sample  
Location Map**

**ATTACHMENT 3**

**Table 4**  
**Soil Sample Results**  
**TPHg, TPHd, TPHmo, and BTEX**  
**Caltrans - I-580**  
**Livermore, California**

Sample Location	Sample Depth (feet bgs)	Date	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)
Excavation North Wall	19	4/4/09	1,000	360	<5.0	<1.0	<1.0	1.9	2.7
Excavation East Wall	19	4/4/09	19	22	<5.0	<0.025	<0.025	<0.025	<0.025
Excavation West Wall	19	4/4/09	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005
Excavation South Wall	19	4/4/09	11	17	<5.0	<0.025	<0.025	<0.025	<0.025
Excavation Bottom East	20	4/4/09	1,500	700	<50	<0.50	<0.50	1.7	2.5
Excavation Bottom West	20	4/4/09	99	29	<5.0	<0.050	<0.050	<0.050	<0.050
Stockpile - Impacted Soil	- -	4/4/09	390	130	<10	<0.050	<0.050	0.85	1.2
Stockpile - Overburden	- -	4/4/09	<1.0	1.5	14	<0.005	<0.005	<0.005	<0.005

Notes-

mg/kg - milligrams per kilogram

bgs - below ground surface

TPHg - Total petroleum hydrocarbons as gasoline

TPHd - Total petroleum hydrocarbons as diesel

TPHmo - Total petroleum hydrocarbons as motor oil

< - Not detected above stated laboratory reporting limit

**Table 5**  
**Soil Sample Results**  
**LUFT 5 Metals**  
**Caltrans - I580**  
**Livermore, California**

Sample Location	Sample Depth (feet bgs)	Date	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
Excavation North Wall	19	4/4/09	<1.5	36	8.5	30	37
Excavation East Wall	19	4/4/09	<1.5	31	6.8	24	32
Excavation West Wall	19	4/4/09	<1.5	22	5.4	20	21
Excavation South Wall	19	4/4/09	<1.5	42	9.9	38	44
Excavation Bottom East	20	4/4/09	<1.5	35	7.8	29	34
Excavation Bottom West	20	4/4/09	<1.5	42	8.9	36	38
Stockpile - Impacted Soil	--	4/4/09	<1.5	41	9.4	33	40
Stockpile - Overburden	--	4/4/09	<1.5	49	23	46	70

Notes -  
mg/kg - milligrams per kilogram  
bgs - below ground surface  
< - Not detected above stated laboratory reporting limit

**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	<b>130</b>	<0.50	<0.50	<0.50	<1.5	<b>1,1-DCA = 1.1</b>
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	<b>1,1-DCA = 0.58</b>
CPT-3	10/15/09	45-49	<50	<50	<0.50	<0.50	<0.50	<1.5	<b>1,1-DCA = 1.1</b>

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





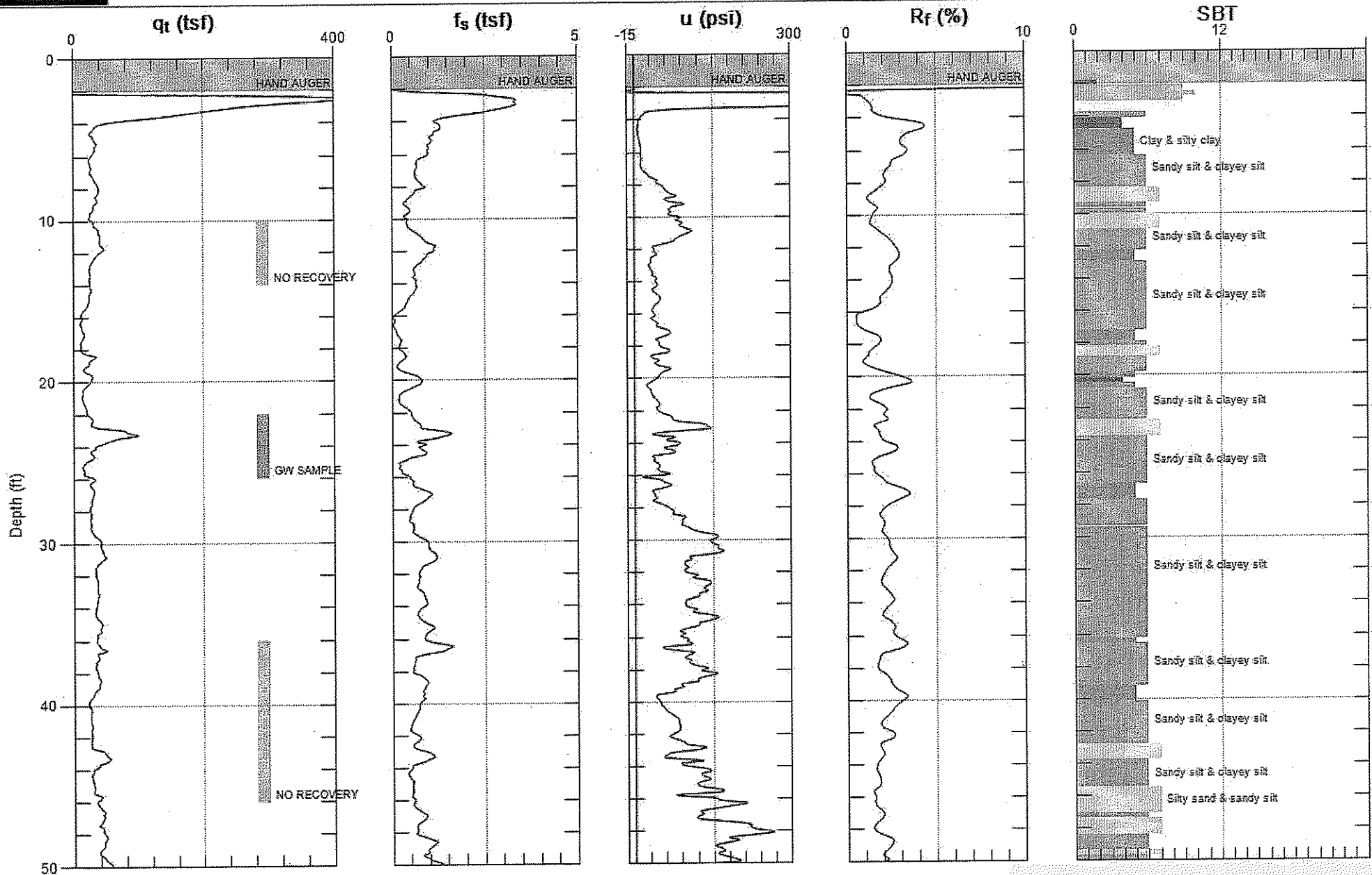
# GEOCON CONSULTANTS

Site: I-580

Sounding: CPT-01

Engineer: J.LOVE

Date: 10/15/2009 11:00



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

**ATTACHMENT 6**



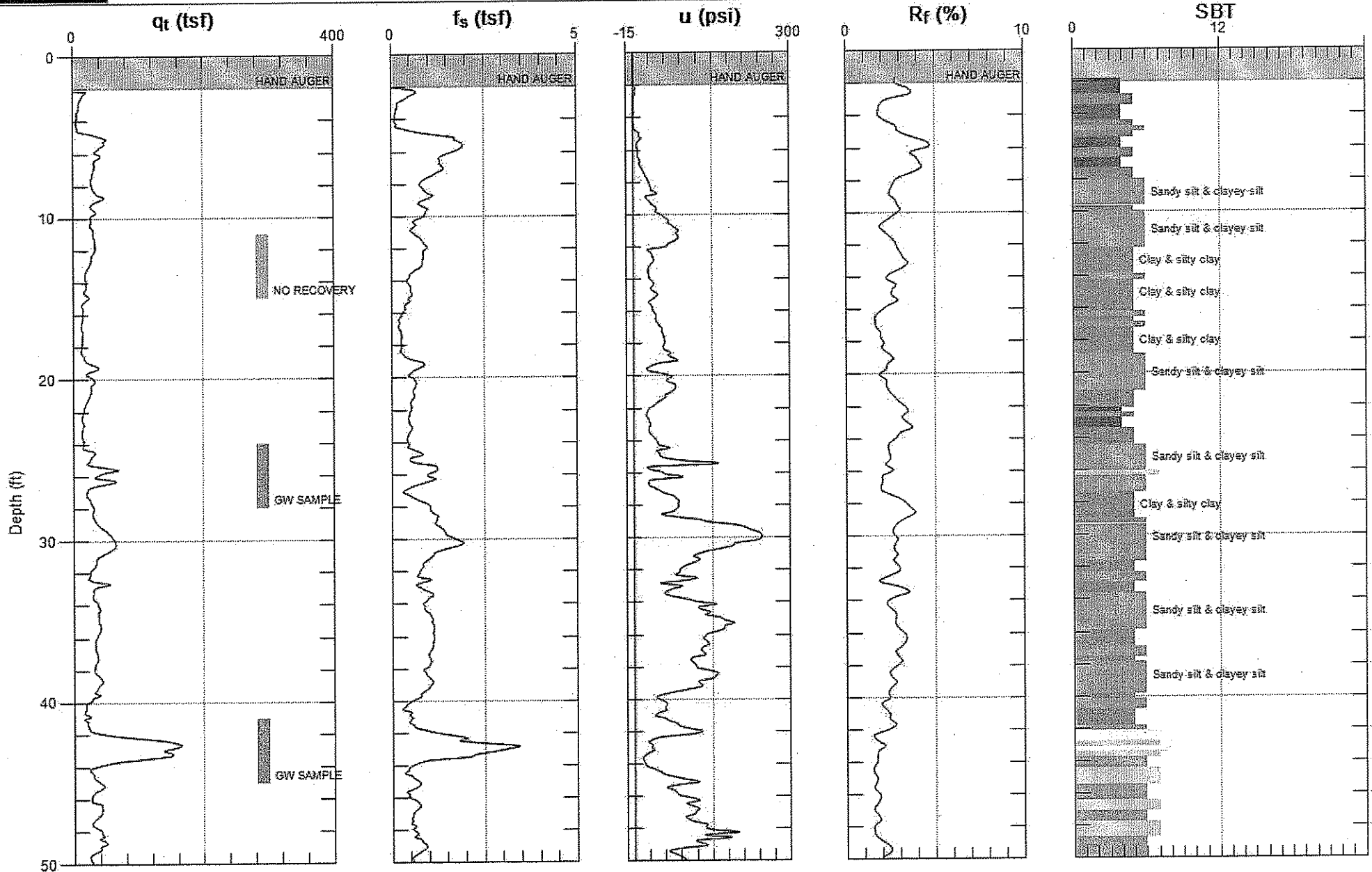
# GEOCON CONSULTANTS

Site: I-580

Sounding: CPT-2

Engineer: J.LOVE

Date: 10/15/2009 10:02



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

SBT: Soil Behavior Type (Robertson 1990)



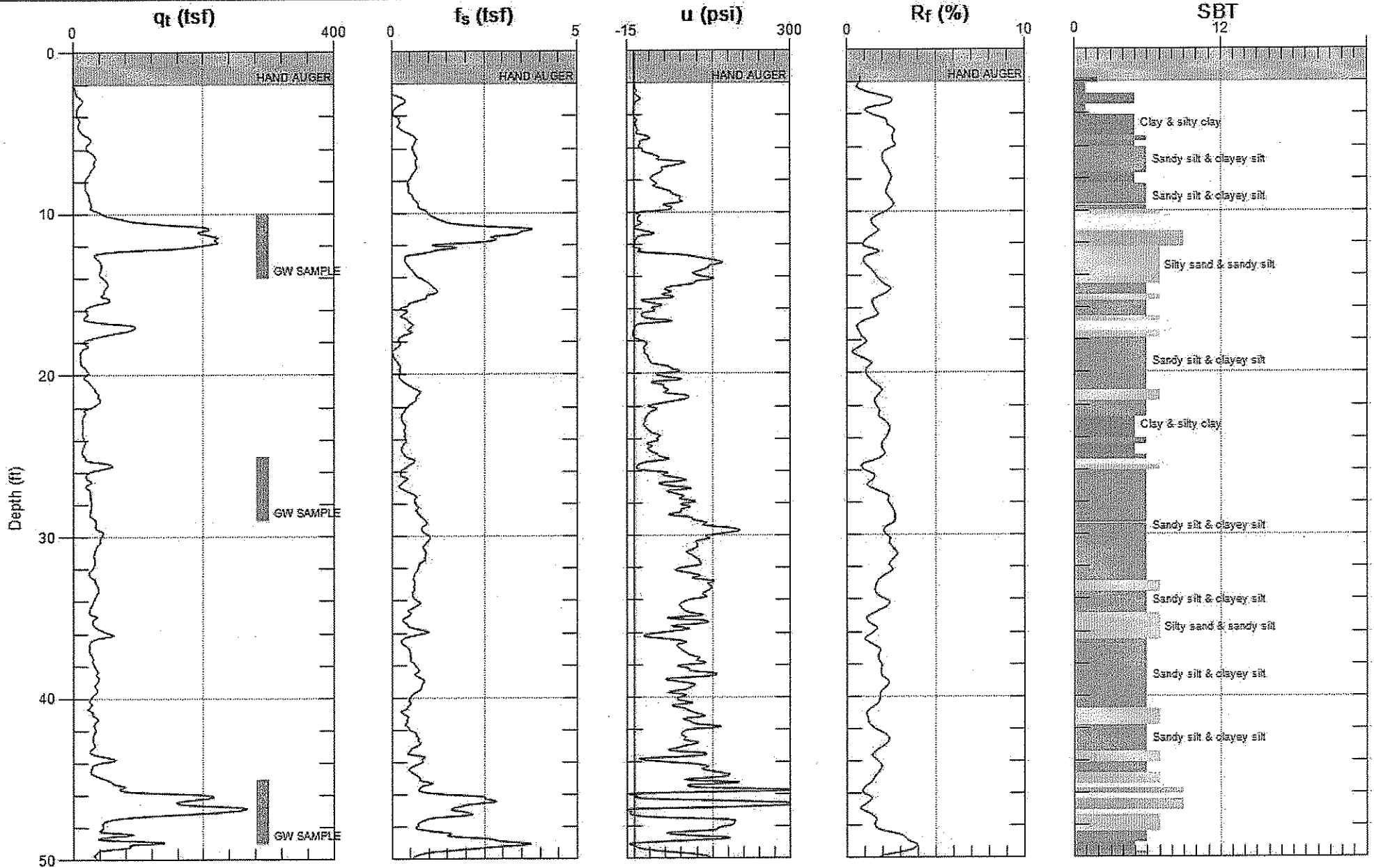
# GEOCON CONSULTANTS

Site: I-580

Sounding: CPT-3

Engineer: J.LOVE

Date: 10/15/2009 01:42



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

SBT: Soil Behavior Type (Robertson 1990)