Denis L. Brown **Shell Oil Products US**

HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Former Shell Service Station
2703 Martin Luther King Jr. Way
Oakland, California
SAP Code 129449
Incident No. 97093397
ACHCSA Case No. RO#0145

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown
Project Manager

CONESTOGA-ROVERS
& ASSOCIATES

19449 Riverside Drive, Suite 230, Sonoma, California 95476
Telephone: 707-935-4850 Facsimile: 707-935-6649
www.CRAworld.com

August 27, 2007

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Plume Delineation and Soil Vapor Sampling Report**
Former Shell Service Station
2703 Martin Luther King Jr. Way
Oakland, California
SAP Code 129449
Incident No. 97093397

Dear Mr. Wickham:

Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the completion of the remaining offsite CPT borings and soil vapor sampling activities associated with the referenced site. The purposes of this investigation were initially detailed during a meeting between Shell and the Alameda County Environmental Health (ACEH) Department on August 2, 2006 and formalized in Cambria Environmental Technology's (Cambria's) August 31, 2006 *Subsurface Investigation Work Plan*. A portion of the work was completed and documented in Cambria's January 31, 2007 *CPT Investigation and Vapor Probe Installation Report*. CRA followed the scope of work and procedures presented in the above-referenced August 31, 2006 *Subsurface Investigation Work Plan,* which was approved by the ACEH in their September 5, 2006 and February 14, 2007 letters to Shell. It should be noted that the February 14, 2007 letter requested submittal of an Interim Remediation Work Plan; however, during a meeting on March 29, 2007, the agency and Shell agreed that an Interim Remediation Work Plan was not yet required, but that additional soil vapor probes should be attempted at 664 or 668 27th Street, as documented in the ACEH electronic correspondence dated March 30, 2007. A technical report was to be submitted by June 29, 2007; however, on June 18, 2007, CRA provided an electronic *Status Update and Request for Extension*, which the ACEH granted in their June 19, 2007 electronic correspondence.

EXECUTIVE SUMMARY

- Borings CPT-6, CPT-7, and CPT-10 were installed; lithologic information was obtained from all three borings to 40 fbg. Only three of the six attempted samples for groundwater collection were successfully obtained due to poor recharge in CPT-6 and CPT-7.

- Vapor probe pairs were successfully installed at 670 and 664 27th Street. Soil vapor samples were collected from the two offsite probe pairs, and from the onsite probes that did not contain groundwater.

- The extent of shallow groundwater impact to the west of the site was not delineated due to poor recharge in the CPT borings; however, the sample obtained from between 21 and 25 fbg at CPT-6 only reported 86 micrograms per liter (µg/l) of TPHg and benzene was below the reporting limit of 0.5 µg/l.

- The groundwater samples from CPT-10 indicate TPHg and benzene at 38,000 µg/l and 1,600 µg/l, respectively at 13-17 fbg, and 640 µg/l and 3.8 µg/l, respectively at 20-23 fbg.

- Six of the 12 onsite soil vapor probes contained water and were unable to be sampled. All six soil vapor samples from the onsite vapor probes that were not saturated contained TPHg concentrations that exceed the Environmental Screening Levels (ESLs) for residential or commercial indoor air, and two of the samples exceeded the ESLs for benzene.

- The two offsite vapor probe pairs were sampled and none of the results were above the ESLs for protection of residential property use.

SITE DESCRIPTION AND BACKGROUND

The site is a former service station located on the northwest corner of Martin Luther King Jr. Way and 27th Street in a mixed commercial and residential area of Oakland, California (Figure 1). Currently, the site is occupied by Auto-Tech West and is utilized as an automotive repair shop.

A summary of previous work performed at the site and additional background information is contained in Attachment A. The site plan and historical sample locations are depicted on Figure 2. The objectives of the work presented below are also presented in Attachment A, for reference.

INVESTIGATION RESULTS

Permit: Drilling permits for the three CPT borings and two vapor probes were obtained from the Alameda County Public Works Agency (W2007-0523 and W2007-0522). For CPT-6 and CPT-7, encroachment permits were obtained from the City of Oakland (#X0700432 and #OB070310). Copies of the permits are included in Attachment B.

Drilling Dates: CPT-6 and CPT-7 were completed on May 17, 2007; CPT-10 was completed on June 8, 2007; VP-7 was installed on June 6, 2007, and VP-8 was installed on May 29, 2007.

Drilling Company: Gregg In Situ, Inc. installed the CPT borings; vapor probes were installed by CRA using hand auger equipment.

Personnel: Geologist Matthias Kennerknecht directed the drilling activities of CPT-6 and CPT-7 and installed the vapor probes, VP-7 and VP-8. Geologist Celina Hernandez directed the installation of boring CPT-10. All work was performed under the supervision of California Professional Geologist Ana Friel.

Drilling Method: Hand Auger (0-5 fbg), then Cone Penetration Testing method for CPT borings.

Number of Borings: Three CPT boring locations (CPT-6, CPT-7, and CPT-10) and two vapor probes (VP-7 and VP-8) were completed. The boring specifications and soil types encountered as logged by the CPT equipment are presented in Gregg In Situ, Inc.'s CPT Site Investigation Reports in Attachment C. The logs for the two vapor probes are included in Attachment D. The boring locations are shown on Figures 2 through 4.

Boring Depths: Borings CPT-6, CPT-7, and CPT-10 were logged to 40 feet below grade (fbg) and the vapor probe borings were logged to 5 fbg.

Soil Sampling: A soil sample was collected from CPT-6 at 17 fbg, since no groundwater was successfully obtained from this interval. No soil samples were obtained from CPT-7. One soil sample from each vapor probe boring was collected from approximately 4.5 fbg.

Groundwater Sampling: Actual depth to first encountered groundwater was not obvious at every location due to the nature of CPT logging. Groundwater sampling was attempted at two depth intervals in all three CPT borings. Groundwater sampling was attempted in CPT-6 at 13-17 fbg (no recovery) and 21-25 fbg (sample CPT-6-23-W). Sampling was attempted in CPT-7 at 10-14 fbg (no recovery) and 18-22 fbg (no recovery). Sampling was attempted in CPT-10 at 13-17 fbg (CPT-10A) and at 20-23 fbg (CPT-10B).

Probe Construction Specs: Each vapor probe boring (VP-7 and VP-8) was extended to 5fbg and 0.25 feet of clean filter pack sand was installed. The deeper probe (with 0.25 feet of screen) was inserted in a tremie pipe with the bottom of the screen placed at 4.75 fbg. Filter pack sand was then added to a depth of 4.0 fbg while the tremie pipe was extracted, leaving the deeper screen interval in place from 4.5 to 4.75 fbg. A one-foot think layer of hydrated bentonite grout was placed from 4.0 to 3.0 fbg, on top of which another 0.25 feet of filter pack sand was placed up to 2.75 fbg. The shallower probe (with 0.25 feet of screen) was inserted in a tremie pipe with the bottom of the screen placed at 2.75 fbg. Additional filter pack was then added to a depth of 2.0 fbg while both tremie pipes were extracted, leaving the shallower screen interval in place from 2.5 to 2.75 fbg. A bentonite seal was placed from 1.5 to 2 fbg and a concrete grout mixture was used to fill the remaining annulus and for installation of the protective well box at grade. The construction details are included on the boring logs in Attachment D.

Vapor Probe Inspection: As previously documented, several of the onsite vapor probes contained water and could not be sampled for vapors. On May 16, 2007, CRA again checked the probes for water, and tried to purge water from any probe that contained water. Up to 1.5 liters of water were purged from some of the probes. Purge water was contained, and later combined with

the purge water from the next groundwater monitoring event, and ultimately reclaimed at Shell's Martinez Refinery.

Vapor Probe Sampling: On May 30, 2007, the onsite probes that did not contain water were purged and sampled. The Teflon tubing from each vapor point was connected to a control valve, and then to a flow regulator attached to a laboratory-supplied sampling manifold connecting two 1-liter summa canisters (purge canister and sampling canister) with pressure gauges. Prior to sampling each vapor probe, a vacuum test was conducted between the summa canisters, the sampling manifold, and the valves by closing the valves, and opening the purge summa canister for approximately 10 minutes. The vapor samples were labeled and stored in a non-cooled ice chest until delivery to the analytical laboratory.

Sample Analyses: The soil and groundwater samples were analyzed for TPHg and BTEX by EPA Methods 8015M or 8260B by either Calscience Environmental Laboratories, Inc. (Calscience) of Garden Grove, California or by Kiff Analytical, LLC of Davis, California. The vapor samples were analyzed for TPHg by EPA Method TO-3, and BTEX by EPA Method TO-15 by Calscience. The certified analytical laboratory reports are included in Appendix E.

Soil Disposal: A minimal volume of waste soil was generated through hand auger clearance activities for the CPT borings. The material was placed in a drum and staged at the subject site, sampled for disposal characterization, and profiled as non-hazardous waste for disposal. On June 12, 2007, Manley and Sons Trucking, Inc. transported approximately 0.12 tons of soil to Allied Waste Industries' Forward Landfill in Manteca, California. Further, a five gallon bucket of soil was generated during the hand auger installation of VP-7. On July 23, 2007, Manley and Sons Trucking, Inc. transported approximately 0.01 tons of soil to Allied Waste Industries' Forward Landfill in Manteca, California. The disposal confirmation documentation is included in Attachment F.

ANALYTICAL RESULTS

Soil Results: The soil analytical data from CPT-6, VP-7, and VP-8 are presented on Table 1. No TPHg was reported in any of the three soil samples at the method detection limit (MDL) of 0.5 milligrams per kilogram (mg/kg). Benzene, ethylbenzene, and xylenes were not reported above the MDL of 0.005 mg/kg and total xylenes were not reported above the MDL of 0.010 mg/kg; however, some of the BTEX constituents were detected below the MDL in CPT-6 at 17 fbg and in VP-8 at 4.5 fbg, as shown on Table 1. Concentrations of TPHg and benzene in soil are presented on Figure 3, and the certified analytical reports are included in Attachment E.

CPT Groundwater Results: The grab groundwater data from the CPT boring intervals that did recover enough to provide samples are presented on Table 2. Data from CPT-6 at 23 fbg indicated low levels of TPHg (86 micrograms per liter [µg/l]), toluene (2.4 µg/l), ethylbenzene (0.38 µg/l), and xylenes (1.44 µg/l). Both intervals from CPT-10 indicated the presence of petroleum constituents with TPHg and benzene in the 13-17 fbg interval reported at 38,000 and 1,600 µg/l, respectively, and TPHg and benzene in the 20-23 fbg interval reported at 640 and 3.8 µg/l, respectively. Concentrations of TPHg and benzene in groundwater are presented on Figure 3, and the certified analytical reports are included in Attachment E.

Soil Vapor Results: Although the screen intervals for the probes are from 2.5 to 2.75 and 4.5 to 4.75 fbg, the samples are identified on the chain-of-custody and laboratory reports as being at 3 and 5 fbg, respectively. Soil vapor samples were obtained from the 3 foot interval in VP-1, VP-4, VP-6, VP-7, and VP-8, and soil vapor samples were obtained from the 5 foot interval in VP-3, VP-4, VP-6, VP-7, and VP-8. The other intervals from the onsite probes contained water and could not be sampled for soil-vapors. The data is presented on Table 3, and the SFBRWQCB Environmental Screening Levels (ESLs) for potential vapor intrusion into commercial and residential indoor air are also shown on Table 3. Data from the onsite vapor probes indicate that TPHg concentrations exceed the commercial ESL at VP-1, VP-3, VP-4, and VP-6, and exceed either residential or commercial ESLs for benzene at VP-1 (raised detection limit), VP-3, and VP-6. None of the four samples from the offsite probes on the residential properties exceed any of the residential ESLs for potential vapor intrusion concerns. Concentrations of TPHg and benzene in soil gas are depicted on Figure 4, and the certified analytical reports are included in Attachment E.

CONCLUSIONS

Lithology and Preferential Pathway: ACEH previously requested that the CPT data be used to delineate the extent of a silty gravel layer encountered at the downgradient off-site well MW-14 at depths between 13 and 14.5 fbg. As presented in the previous report, borings CPT-3, CPT-4, and CPT-5 depicted sandy silt/silty sand lenses at elevations near, but slightly shallower than the sandy silt lens observed downgradient at MW-14. Boring CPT-4 also contains a one-foot thick sandy silt at approximately the same elevation as the silty gravel layer in MW-14. Also, borings CPT-4 and CPT-5 both have sandy silt lenses that are a bit deeper than the interval in MW-14, and boring CPT-2 depicted a lens described as "stiff fine grained" by the CPT log (which has no direct correlation with the Unified Soils Classification System used on boring logs) at an elevation slightly lower than the silty gravel in MW-14. From the most recent CPT work, only CPT-10 contained sandy lenses at 15 and 16 fbg, and another at approximately 21-22 fbg, both of which were successfully sampled. The sandy lenses do not appear to extend into 27th Street, as evidenced by the logs of CPT-6 and CPT-7. Based on the CPT logs, there are thin lithologic units of higher permeability that appear to be allowing preferential migration of contaminants in groundwater toward MW-14 and CPT-10. Further delineation and monitoring of the first encountered water zone to the northwest and west of the site appears warranted.

Vapor Issues: Concentrations of TPHg and benzene in soil gas at the subject site are elevated and exceed the ESLs for the protection of indoor commercial workers. The subject site is used intermittently for the performance of auto repair work, which typically requires that the service bay door be open during working hours. Given the nature of auto repair work and the ventilation provided by an open service bay door, there is not an immediate threat to the onsite commercial workers at this location from soil vapors. Further, samples from both the 3 and 5 fbg depths in the two offsite vapor probe pairs located on residential property indicate that the soil gas concentrations immediately adjacent to the subject site and three parcels downgradient do no exceed the residential ESLs. However, since the onsite concentrations do exceed the commercial ESLs and since residences are located in close proximity, active remediation appears to be warranted to decrease the onsite groundwater concentrations that are resulting in elevated soil gas concentrations in the subsurface, and monitoring of the probes at the residential properties is also prudent.

RECOMMENDATIONS

Based on the data presented in this and other documents for this site, and as presented above, additional activities are warranted at this site. Thus, Shell recommends:

- Installing groundwater monitoring wells to confirm delineation of the groundwater plume to the northwest, west, and southwest of the site (Figure 5).

- Conducting quarterly sampling of the vapor probe pairs offsite (VP-7 and VP-8) for at least one year.

- Preparation of a Corrective Action Plan to reduce the groundwater concentrations at this site.

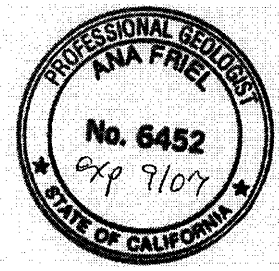
SCHEDULE

Upon receipt of approval from the ACHCSA of these recommendations, CRA will initiate the proposed activities, on behalf of Shell.

CLOSING

If you have any questions regarding the contents of this document, please call Ana Friel at (707) 268-3812.

Sincerely,
Conestoga-Rovers & Associates



Ana Friel, PG
Project Manager

Figures:
1 - Vicinity Map
2 – Site Plan
3 – Soil and Grab Groundwater Data
4 – Soil Vapor Data
5 – Proposed Well Location Map

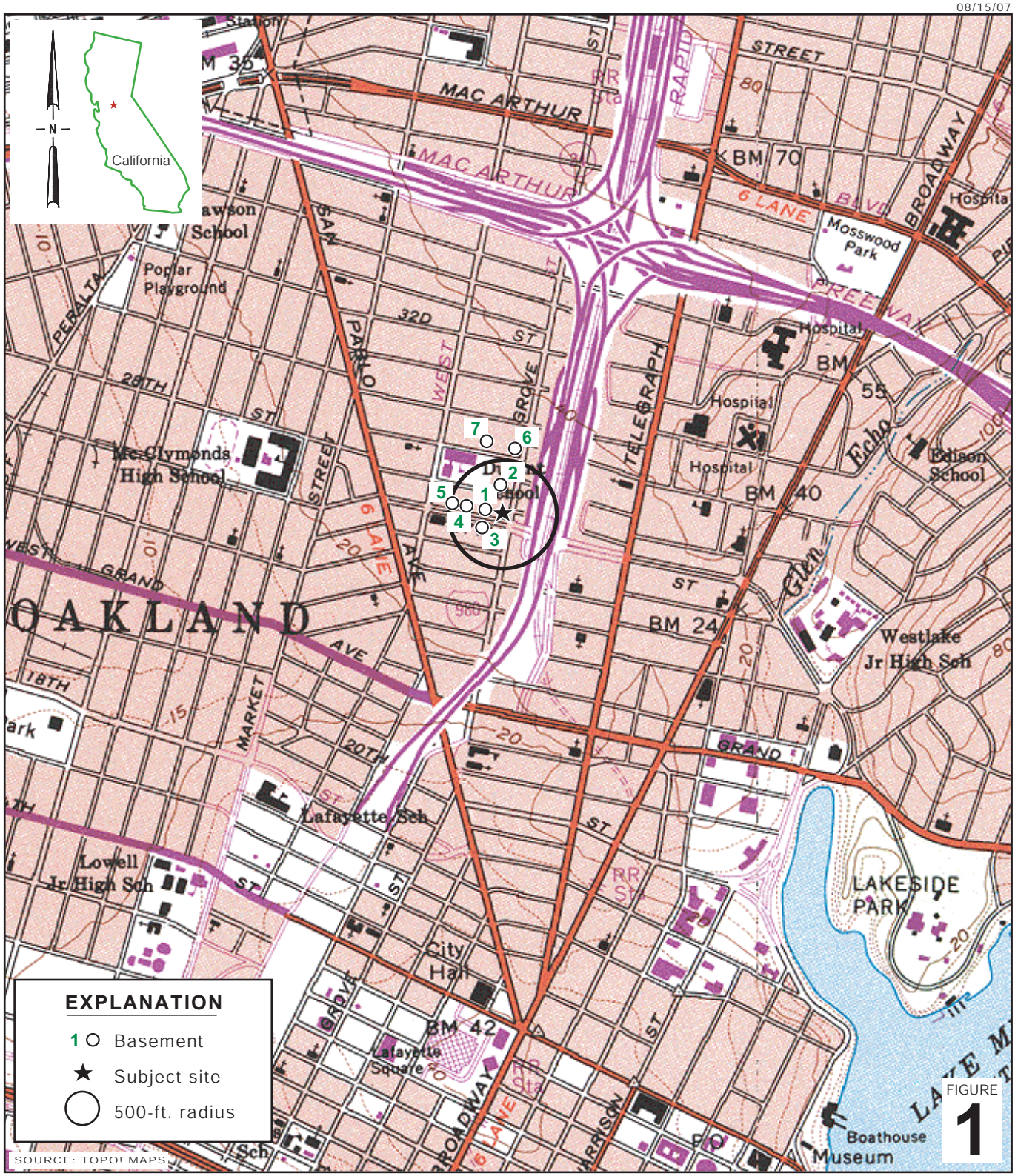
Tables:
1 – Soil Analytical Data
2 – Grab Groundwater Analytical Data
3 – Soil Vapor Analytical Data

Attachments:
A - Site History
B - Permits
C – Gregg Drilling CPT Site Investigation Reports
D – Vapor Probe Boring Logs
E – Certified Analytical Reports
F - Disposal Documentation

cc: Denis Brown, Shell Oil Products US
Rodney & Janet Kwan, property owners of subject site
Monique Oates, property owner at 670 27th Street in Oakland
Scott Merillat, property owner at 664 27th Street in Oakland

I:\Sonoma.Shell\Oakland 2703 Martin Luther King Jr Way\REPORTS\07MayJun SI Report Aug07\07May-Jul CPT_VPsampling Rpt Aug07.doc

08/15/07



I:\SONOMA SHELL\OAKLAND 2703 MARTIN LUTHER KING\GRAPHICS\VICINITY.AI

FIGURE 1

0 1/8 1/4 1/2 1

SCALE (MILES)

Former Shell Service Station
2703 Martin Luther King Jr. Way
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

08/17/07

28TH STREET

Residential 679 28th St.
Residential 673 28th St.
Residential 669 28th St.
Residential 663 28th St.
Vacant Lot 2727-29 Martin Luther King
Residential 665 28th St.
Residential 2719-23 Martin Luther King
Former Shell Station 2703 Martin Luther King
carport
BUILDING
TRENCH
Former Vent Lines
Former USTs
Former Dispensers
Wooden Carport
A.G. W/O AST
DRIVEWAY
Residential 670 27th St.
Residential 688 27th St.
Residential 664 27th St.
MARTIN LUTHER KING JR. WAY
27TH STREET
median

CPT-10
CPT-9
CPT-8
MW-14
VP-7
CPT-7
CPT-6
VP-6
GP-7
GP-6
MW-7
MW-8
GP-5
VP-1
B-23
B-13
VP-5
VP-8
CPT-3
MW-5
GP-8
B-5
GP-9
B-17
TP1-N
GP-10
TP3-W
VP-4
VP-2
GP-4
B-1
TP4-E
B-9*
B-6*
B-19
B-7*
CPT-2
CPT-4
TP2-S
B-3
CPT-5
MW-6
GP-3
V-1
B-18
V-2
VP-3
MW-4
GP-2
B-2
CPT-1
B-10
GP-1
MW-12
MW-1
B-8*
MW-2
MW-3
B-4

EXPLANATION

VP-7	Vapor probe location (5-6/07)
CPT-6	CPT boring location (5-6/07)
CPT-8	Attempted CPT boring location (5-6/07)
CPT-1	CPT boring location (10/06)
VP-1	Vapor probe location (1/06)
V-1	Soil vapor well location (7/96)
MW-1	Monitoring well location (7/96-2/06)
B-23	Soil boring location (1/06)
GP-1	Soil boring location (8/05)
B-20	Soil boring location (4/02)
B-17	Soil boring location (11/00)
B-10	Soil boring location (7/96)
TP3-W	UST excavation samples (3/96)
B-1	Soil boring location (5/95)
*	Not surveyed
TP1-N	UST excavation samples (10/94)

N

0 20 40 80

Scale (ft)

Basemap from Virgil Chavez Land Surveying and Alameda County Assessors Parcel Map

I:\SONOMA.SHELL\OAKLAND 2703 MARTIN LUTHER KING JR WAY\GRAPHICS\EXT SITE PLAN.DWG

Site Plan

CONESTOGA-ROVERS & ASSOCIATES

Former Shell Service Station
2703 Martin Luther King Jr Way
Oakland, California

FIGURE
2

08/15/07

28TH STREET

Residential 679 28th St.

Residential 673 28th St.

Residential 669 28th St.

Residential 663 28th St.

Vacant Lot 2727-29 Martin Luther King

MW-12

Residential 665 28th St.

Residential 2719-23 Martin Luther King

CPT-10 (Groundwater, µg/L)			
Depth	Date	TPHg	Benz.
13-17	6/8/07	38,000	1,600
20-23	6/8/07	640	3.8

CPT-10

VPT-8 (Soil, mg/kg)			
Depth	Date	TPHg	Benz.
4.5	5/29/07	<0.50	0.00096

A.G. W/O AST

carport

VP-6

MW-8

MW-7

BUILDING

MW-1

VP-5

DRIVEWAY

CPT-9

VP-1

MW-5

VP-8

CPT-3

VP-4

V-1

CPT-5

CPT-8

MW-14

VP-7

VP-7 (Soil, mg/kg)			
Depth	Date	TPHg	Benz.
4.5	6/8/07	<0.50	<0.0050

Residential 670 27th St.

Residential 688 27th St.

Residential 664 27th St.

VP-2

CPT-2

MW-6

CPT-4

Former Shell Station
2703 Martin Luther King

MW-4

V-2

VP-3

CPT-1

MW-3

MW-2

DRIVEWAY

DRIVEWAY

DRIVEWAY

MARTIN LUTHER KING JR. WAY

27TH STREET

median

CPT-7 (Groundwater, µg/L)			
Depth	Date	TPHg	Benz.
10-14	5/17/07	NR	NR
18-22	5/17/07	NR	NR

CPT-7

CPT-6

CPT-6 (Groundwater, µg/L)			
Depth	Date	TPHg	Benz.
13-17	5/17/07	NR	NR
21-25	5/17/07	86	<0.50
CPT-6 (Soil, mg/kg)			
Depth	Date	TPHg	Benz.
17	5/17/07	<0.50	0.0020

N

0 20 40 80

Scale (ft)

EXPLANATION

- VP-7 — Vapor probe location (5-6/07)
- CPT-6 — CPT boring location (5-6/07)
- CPT-8 — Attempted CPT boring location (5-6/07)
- CPT-1 — CPT boring location (10/06)
- VP-1 — Vapor probe location (1/06)
- V-1 — Soil vapor well location (7/96)
- MW-1 — Monitoring well location

CPT-6 (Groundwater, µg/L)			
Depth	Date	TPHg	Benz.
13-17	5/17/07	NR	NR
21-25	5/17/07	86	<0.50

— Sample ID

— Sample depth and date and TPHg and benzene concentrations, in grab groundwater, in µg/L

CPT-6 (Soil, mg/kg)			
Depth	Date	TPHg	Benz.
17	5/17/07	<0.50	0.0020

— Sample ID

— Sample depth and date and TPHg and benzene concentrations, in soil, in mg/kg

Note:
NR = No recovery

Soil and Grab Groundwater Data

May 17 and 29 & June 6 and 8, 2007

CONESTOGA-ROVERS & ASSOCIATES

Former Shell Service Station

2703 Martin Luther King Jr Way

Oakland, California

FIGURE

3

Basemap from Virgil Chavez Land Surveying and Alameda County Assessors Parcel Map

I:\SONOMA.SHELL\OAKLAND 2703 MARTIN LUTHER KING JR WAY\GRAPHICS\SOIL AND GW DATA 5-07.DWG

08/15/07

28TH STREET

Residential 679 28th St.

Residential 673 28th St.

Residential 669 28th St.

Residential 663 28th St.

Vacant Lot
2727-29 Martin Luther King

MW-12

Residential 665 28th St.

Residential
2719-23 Martin Luther King

A.G. W/O AST

VP-1 (Soil vapor, µg/m³)			
Depth	Date	TPHg	Benz.
3	5/30/07	**5,500,000**	**<510**

VP-6 (Soil vapor, µg/m³)			
Depth	Date	TPHg	Benz.
3	5/30/07	**3,500,000**	110
5	5/30/07	**1,900,000**	<100

CPT-10

VP-8 (Soil vapor, µg/m³)			
Depth	Date	TPHg	Benz.
3	5/12/07	<23,000	20
5	5/12/07	<22,000	33

MW-8 VP-6

MW-7 VP-5

BUILDING

MW-1

DRIVEWAY

CPT-9

VP-1 MW-5 VP-4

VP-4 (Soil vapor, µg/m³)			
Depth	Date	TPHg	Benz.
3	5/30/07	**800,000**	<79
5	5/30/07	**680,000**	<66

VP-8 CPT-3

VP-2 V-1

CPT-2 CPT-4 CPT-5

MW-6

CPT-8 MW-14 VP-7

Residential 670 27th St.

Residential 688 27th St.

Residential 664 27th St.

VP-3 MW-4 V-2

CPT-1

Former Shell Station
2703 Martin Luther King

MW-2

DRIVEWAY

VP-7 (Soil vapor, µg/m³)			
Depth	Date	TPHg	Benz.
3	5/12/07	<21,000	23
5	5/12/07	<21,000	23

VP-3 (Soil vapor, µg/m³)			
Depth	Date	TPHg	Benz.
5	5/30/07	**31,000,000**	**760**

MW-3

DRIVEWAY

DRIVEWAY

MARTIN LUTHER KING JR. WAY

27TH STREET

median

CPT-7

CPT-6

N

0 20 40 80

Scale (ft)

Basemap from Virgil Chavez Land Surveying and Alameda County Assessors Parcel Map

EXPLANATION

- VP-7 — Vapor probe location (5-6/07)
- CPT-6 — CPT boring location (5-6/07)
- CPT-8 — Attempted CPT boring location (5-6/07)
- CPT-1 — CPT boring location (10/06)
- VP-1 — Vapor probe location (1/06)
- V-1 — Soil vapor well location (7/96)
- MW-1 — Monitoring well location

VP-1 (Soil vapor, µg/m³)			
Depth	Date	TPHg	Benz.
3	5/30/07	**5,500,000**	**<510**

— Sample ID

— Sample depth and date and TPHg and benzene concentrations, in soil vapor, in µg/m³

Note:

Ambient Air at Site (Vapor, µg/m³)			
Depth	Date	TPHg	Benz.
NA	5/30/07	**<19,000**	**16**

Soil Vapor Data

May 30 and June 12, 2007

CONESTOGA-ROVERS & ASSOCIATES

Former Shell Service Station

2703 Martin Luther King Jr Way

Oakland, California

FIGURE

4

I:\SONOMA.SHELL\OAKLAND 2703 MARTIN LUTHER KING JR WAY\GRAPHICS\SOIL VAPOR DATA 5-07.DWG

08/17/07

Proposed Monitoring Well Location Map

EXPLANATION

- MW-9 — Proposed monitoring well location
- VP-7 — Vapor probe location (5-6/07)
- CPT-6 — CPT boring location (5-6/07)
- CPT-8 — Attempted CPT boring location (5-6/07)
- CPT-1 — CPT boring location (10/06)
- VP-1 — Vapor probe location (1/06)
- V-1 — Soil vapor well location (7/96)
- MW-1 — Monitoring well location (7/96-2/06)

28TH STREET

MW-10

Residential 679 28th St.

Residential 673 28th St.

Residential 669 28th St.

Residential 663 28th St.

Vacant Lot 2727-29 Martin Luther King

MW-12

Residential 665 28th St.

Residential 2719-23 Martin Luther King

MW-11

MW-9

CPT-10

A.G. W/O AST

Former Shell Station 2703 Martin Luther King

VP-6

carport

BUILDING

DRIVEWAY

MW-7

MW-8

MW-1

CPT-9

VP-1

VP-5

Wooden Carport

VP-8

CPT-3

MW-5

VP-4

VP-2

CPT-8

CPT-2

CPT-4

V-1

CPT-5

MW-14

MW-6

VP-7

Residential 670 27th St.

Residential 688 27th St.

Residential 664 27th St.

VP-3

MW-4

V-2

CPT-1

MW-2

MW-3

DRIVEWAY

DRIVEWAY

MARTIN LUTHER KING JR. WAY

MW-13

27TH STREET

median

CPT-7

CPT-6

MW-15

N

0 20 40 80

Scale (ft)

FIGURE

5

Former Shell Service Station

2703 Martin Luther King Jr Way

Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

I:\SONOMA.SHELL\OAKLAND 2703 MARTIN LUTHER KING JR WAY\GRAPHICS\PROP WELL.DWG

Basemap from Virgil Chavez Land Surveying and Alameda County Assessors Parcel Map

Table 1. Soil Analytical Data, Former Shell Service Station, 2703 Martin Luther King Jr. Way, Oakland, California

Boring ID	Depth (feet)	Date Sampled	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)
CPT-6-17	17	17-May-07	<0.50	0.0020 a	0.0032 a	<0.0050	0.0019 a
VP-7-4.5	4.5	06-Jun-07	<0.50	<0.0050	<0.0050	<0.0050	<0.010
VP-8-4.5	4.5	29-May-07	<0.50	0.00096 a	0.00084 a	0.00084 a	0.0015 a

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline, analyzed by EPA Method 8015B (M)

BTEX = Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B

mg/kg = Milligrams per kilogram = parts per million

<x = Not detected at reporting limit x

a = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

Table 2. Grab Groundwater Analytical Data, Former Shell Service Station, 2703 Martin Luther King Jr. Way, Oakland, California

Boring ID	Depth (feet)	Date Sampled	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
CPT-6	13-17	17-May-07	Attempted sample - No groundwater recovery				
CPT-6-23-W	21-25	17-May-07	86	<0.50	2.4	0.38 a	1.44 a
CPT-7	10-14	17-May-07	Attempted sample - No groundwater recovery				
CPT-7	18-22	17-May-07	Attempted sample - No groundwater recovery				
CPT-10A	13-17	08-Jun-07	38,000	1,600	1,100	2,600	7,700
CPT-10B	20-23	08-Jun-07	640	3.8	4.9	23	110

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline, analyzed by EPA Method 8015B (M)

BTEX = Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B

µg/l = micrograms per liter = parts per billion

<x = Not detected at reporting limit x

a = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

Table 3. Soil Vapor Analytical Data, Former Shell Service Station, 2703 Martin Luther King Jr. Way, Oakland, California

Sample ID	Sample Depth (fbg)	Date Sampled	TPHg ($\mu g/m^3$)	B ($\mu g/m^3$)	T ($\mu g/m^3$)	E ($\mu g/m^3$)	X ($\mu g/m^3$)
VP-1-3	3	30-May-07	**5,500,000**	**<510**	690	<690	<2,090
VP-1-5			Unable to sample; water in probe				
VP-2-3			Unable to sample; water in probe				
VP-2-5			Unable to sample; water in probe				
VP-3-3			Unable to sample; water in probe				
VP-3-5	5	30-May-07	**31,000,000**	**760**	<75	<86	<256
VP-4-3	3	30-May-07	**800,000**	<79	240	<110	<320
VP-4-5	5	30-May-07	**680,000**	<66	170	<90	<270
VP-5-3			Unable to sample; water in probe				
VP-5-5			Unable to sample; water in probe				
VP-6-3	3	30-May-07	**3,500,000**	**110**	320	<55	160
VP-6-5	5	30-May-07	**1,900,000**	**<100**	410	<140	<420
Ambient (at site)		30-May-07	<19,000	16	16	<3.1	<9.2
VP-7-3	3	12-Jun-07	<21,000	23	7,000	110	241
VP-7-5	5	12-Jun-07	<21,000	23	2,100	110	230
VP-8-3	3	12-Jun-07	<23,000	20	9,300	120	267
VP-8-5	5	12-Jun-07	<22,000	33	11,000	120	278
Environmental Screening Levels SFBRWQCB, February 2005	**Commercial**	**72,000**	**290**	**180,000**	**1,200,000**	**410,000**
	Residential	**26,000**	**85**	**63,000**	**420,000**	**150,000**

Abbreviations and Notes:

Results in **bold** exceed Environmental Screening Level

fbg = Feet below grade

$\mu g/m^3$ = micrograms per cubic meter

<x = Not detected at reporting limit x

TPHg = Total petroleum hydrocarbons as gasoline by Modified EPA Method TO-3 GC/FID

BTEX = Benzene, toluene, ethylbenzene, and xylenes by Modified EPA Method TO-15

Attachment A

Site History

ATTACHMENT A
Site History
Former Shell Service Station
2703 Martin Luther King Jr. Drive
Oakland, CA

PREVIOUS WORK

1994 UST Removal: The 2,000-gallon UST was removed on October 11, 1994 by KTW & Associates on behalf of ATW. Two soil samples (TP-1-N and TP-2-S) were collected from beneath the tank. Chemical analysis of the soil samples identified the presence of total petroleum hydrocarbons as gasoline (TPHg) at concentrations ranging from 870 milligrams per kilogram (mg/kg) to 18,000 mg/kg. Benzene concentrations in these samples ranged from 2.9 to 100 mg/kg. The tank pit remained open until March 19, 1996 when the excavation was back-filled subsequent to over-excavation by a Shell contractor.

1995 Phase I Environmental Site Assessment (ESA): In August and September 1995, Enviros Inc. (Enviros) performed a Phase I ESA for this site. Available information collected during this ESA indicates that the subject property was occupied by residential housing prior to approximately 1959. A building permit to erect a building was obtained for Shell Oil Company in February 1959. A building permit to "close lube bays with sheet metal panels" was secured for Shell Oil Company in July 1976.

In 1979, several building permits were secured for Acme to modify existing site structures. Two building permits were secured in 1979 related to the installation of a fuel pump at the site.

During a site survey in conjunction with the Phase I ESA, an excavation was observed near the southwest corner of the service building. The excavation was covered by a blue tarp. This excavation's location is consistent with that of the 2,000-gallon UST removed in 1994 by ATW, and with a large concrete slab observed in aerial photographs taken in 1971 and 1973, and a smaller concrete slab observed in aerial photographs taken in 1981 and 1985. The larger concrete slab observed in the aerial photographs was likely covering the USTs operated by Shell, and the smaller slab was likely covering the UST operated by Acme, confirming that the same location was used for both UST complexes.

1995 Subsurface Investigation: A site assessment was performed by ACC Environmental Consultants on May 23, 1995. This included drilling nine soil borings (B-1 through B-9) using a pneumatic sampling tool in the vicinity of the excavation (which formerly housed both Shell's and Acme's USTs) and the product dispenser islands, and collecting soil and groundwater samples for chemical analysis. TPHg concentrations in soil samples ranged from <20.0 to 830 mg/kg. Benzene concentrations ranged from <1.0 to 1.8 mg/kg. Separate phase hydrocarbons (SPH) were identified in water samples collected from four of the soil borings (B-1, B-5, B-6, and B-9). TPHg concentrations in the non-SPH grab groundwater samples submitted

for chemical analysis ranged from <50 to 89,000 micrograms per liter (µg/l). Benzene concentrations in the grab groundwater samples ranged from <0.5 to 21,000 µg/l.

1996 Over-Excavation: Over-excavation and back-filling of Acme's former UST excavation were performed on March 19, 1996. The excavation, originally left open to 9 fbg, was over-excavated to approximately 11 fbg. Two soil samples (TP-3-W and TP-4-E) were collected from the bottom of the over-excavated former UST area. Soil sample TP-3-W, collected from the western end of the excavation, contained 560 mg/kg TPHg, and 3.1 mg/kg benzene. Soil sample TP-4-E, collected from the eastern end of the excavation, contained 2,700 mg/kg TPHg and <3.0 mg/kg benzene. The excavation was back-filled with clean imported fill material. Soil sampling and back-filling activities are documented in Enviros' May 10, 1996 correspondence.

1996 Subsurface Investigation: In July 1996, Enviros performed additional site assessment activities. Six exploratory borings (B-10, B-11, B-12, B-13, V-1, and V-2) were drilled and sampled on July 17 and 19, 1996 using a hollow-stem auger drill rig. Borings B-11 and B-12 were completed as groundwater monitoring wells MW-1 and MW-2, and borings V-1 and V-2 were completed as soil vapor extraction wells V-1 and V-2, respectively. Soil sampling was not performed in boring V-1 due to the fact that it was installed into the back-fill material within the former UST excavation. A soil sample from below the saturated zone in boring V-2 was submitted for physical parameter analyses (porosity, permeability, fractional organic carbon content, and dry bulk density).

TPHg and benzene were not detected in soil samples collected from MW-1 (B-11), MW-2 (B-12), and B-13. TPHg was detected in soil samples collected from B-10 and V-2 at concentrations of 1.7 and 110 mg/kg, respectively. Benzene concentrations in soil samples from B-10 and V-2 were <0.0050 and 0.29 mg/kg, respectively.

Grab groundwater samples were collected from borings B-10, B-12 (MW-2), and B-13 at the depth of first encountered groundwater (approximately 8 to 11 fbg) for chemical analysis. Boring B-11 (MW-1) did not yield sufficient groundwater for grab groundwater sample collection. Monitoring wells MW-1 and MW-2 were developed and sampled on August 2, 1999 by Blaine Tech Services (Blaine) of San Jose, CA. TPHg concentrations in the groundwater samples ranged from <50 to 290,000 µg/l. Benzene concentrations ranged from <0.50 to 34,000 µg/l.

1997 Modified Phase I ESA: In February 1997, Enviros performed a modified Phase I ESA for the subject facility. A review of aerial photographs (1952 to 1994), city directories (1967 to 1993) and Sanborn maps (1912 to 1970) did not reveal evidence of an off-site source of petroleum hydrocarbons which would have impacted groundwater onsite. The properties located north and west of the subject facility appear to have been occupied by residential houses from at least 1912 to the present. The nearest gasoline stations identified in the vicinity of the subject

facility were a former Chevron station (740 27th Street at West) approximately 450 feet to the west, a former station (26th Street and Martin Luther King, Jr. Way) approximately 300 feet to the south, and a former Mobil station (554 27th Street) approximately 950 feet to the east.

2000 Sensitive Receptor Survey: In late 2000, Cambria performed a sensitive receptor survey which attempted to identify wells and underground utility conduits. Cambria obtained utility conduit maps from the City of Oakland Engineering Department to locate and map underground utility conduits which may act as preferential pathways for contaminant migration from the site. These conduit trenches are typically back-filled with materials which are more permeable than the surrounding native soils, therefore providing a path of least resistance for petroleum hydrocarbon migration within the local groundwater. Using these maps, Cambria identified the sanitary and storm sewer systems as the only utility conduits in the site vicinity which may act as preferential pathways. All other utilities are typically buried at depths which are shallower than those of the sewer systems. Conduits identified in the area are located at depths of approximately 3.5 to 9 fbg. Therefore, the potential does exist for groundwater to flow within these conduit trenches. Groundwater depth onsite historically ranges from approximately 4.5 to 10 fbg. However, since the typical groundwater flow direction onsite has generally been to the south, it is likely that any contaminant migration within the utility conduits would be limited, since the utility conduits located to the south of the site are the shallowest of all the conduits identified adjacent to the site at depths of 3.5 to 5.5 fbg. Cambria obtained well installation and destruction records from the California Department of Water Resources (DWR) in order to identify any active water producing wells in the vicinity of the site which may be at risk to petroleum hydrocarbon impact due to contaminant migration from the subsurface of the site. DWR records did not identify any existing wells within a ½-mile radius of the site.

2000 Subsurface Investigation: In November 2000, Cambria installed three soil borings (B-17, B-18 and B-19) and three groundwater monitoring wells (MW-3, MW-4 and MW-5). Up to 2,100 mg/kg TPHg and 3.3 mg/kg benzene were reported in soil samples collected. No TPHg or benzene was detected in soil samples collected from well MW-3. Except for 0.0070 mg/kg detected in soil sample B-18-7.0, no methyl tertiary butyl ether (MTBE) was detected in any of the analyzed soil samples. Tertiary butyl alcohol (TBA) was detected in soil samples MW-4-5.0 and B-19-5.0 at concentrations of 0.0079 and 0.0059 mg/kg, respectively.

Grab groundwater samples were collected from borings B-17 through B-19 at first encountered groundwater for analyses during the investigation. TPHg concentrations in grab water samples collected from the borings ranged from 58,000 to 190,000 µg/l. Benzene concentrations ranged from 4,400 to 13,000 µg/l. MTBE was detected in groundwater at concentrations of 16 and

300 µg/l from B-19 and B-17, respectively, and TBA was detected at 240 µg/l in B-19 only. No SPH was observed during the investigation.

2001 Oxygen Releasing Compound (ORC) Installation: As approved by the (ACHCSA), Blaine installed ORCs in wells V-1 and V-2 during the second quarter monitoring event on May 2, 2001. ORCs were removed during the fourth quarter 2001 monitoring event. MTBE has not been detected in these two wells since the ORCs were installed.

2002 Site Investigation: In April 2002, Cambria installed borings B-20 through B-22. Groundwater was first encountered in the borings between 8.0 fbg (B-20) and 8.8 fbg (B-21 and B-22). The maximum TPHg and benzene concentrations detected in soil were 380 and 0.17 mg/kg, respectively, in the soil sample collected from 8.0 fbg in boring B-22, located behind the station building. No TPHg was detected in soil samples collected from boring B-21. No MTBE was detected in any of the analyzed soil samples collected from borings B-20, B-21, or B-22. Up to 160,000 µg/l TPHg and 18,000 µg/l benzene were reported in grab groundwater samples collected from borings B-20, B-21, and B-22. No MTBE was detected in grab groundwater samples collected from the borings. The complete report of findings was included in Cambria's June 21, 2002 *Site Investigation Report*. This document included recommendations for additional activities; however, a response from ACHCSA was never received.

2003 - 2005 Oxygen Releasing Compound (ORC) Installation: Although agency approval was not received, Shell proactively installed ORC in wells MW-5 and V-2 during first quarter of 2003. The ORCs were replaced on a semi-annual basis. The use of ORC was discontinued during the first quarter 2005, at Shell's request.

May 2005 Agency Meeting: Since no agency response was received to the June 2002 *Site Investigation Report* that contained recommendations for additional investigation, and since monitoring continued to indicate elevated concentrations of volatile constituents in groundwater, Shell authorized Cambria to prepare a work plan to investigate subsurface soil, groundwater, and soil vapor conditions along the property boundaries and at select locations on site. A new case worker was assigned to this project in early 2005, and following a meeting with the new case worker, technical comments and work plan approval were received in ACEH correspondence dated June 6, 2005. On August 15, 2005, Cambria submitted correspondence providing responses to the technical comments, notification of field work, and a request for extension for the report of findings. In correspondence dated August 19, 2005, ACEH granted the extension.

2005 Soil Vapor Investigation: From August 28 through 31, 2005, Cambria installed ten soil borings (GP-1 through GP-10). In soil, TPHg was detected from borings GP-1 at 10.0 fbg, GP-2 at 4.5 fbg, GP-3 at 5.0 and 8.5 fbg, GP-6 at 9.5 fbg, and GP-7 at 9.5 fbg at concentrations ranging from 1.5 to 3,300 mg/kg and benzene was detected from borings GP-2 at 4.5 fbg, and GP-3 at 5.0

and 8.5 fbg at concentrations ranging from 0.027 to 15 mg/kg. In groundwater, TPHg was detected in all four borings (GP-1, GP-3, GP-6, and GP-7) at concentrations ranging from 9,100 to 140,000 µg/l and benzene was also detected in all four groundwater samples at concentrations ranging from 320 to 17,000 µg/l. Soil vapor samples were collected from each boring and TPHg was detected in GP-1 through GP-10 at concentrations ranging from 350 to 71,000,000 micrograms per cubic meter (ug/m^3). Benzene was detected in soil samples collected from borings GP-1 through GP-3 and GP-5 through GP-10 at concentrations ranging from <4.1 to 170,000 ug/m^3. A complete discussion and presentation of these activities and findings is included in Cambria's November 15, 2005 *Site Investigation Report*. This report also included recommendations for performing a door-to-door survey within 300 feet of the site to confirm basement locations, building construction, and potential sources; preparing work plans for pilot testing and plume delineation. Cambria submitted the November 22, 2005 *Feasibility Study Work Plan* and the December 16, 2005 *Plume Delineation Work Plan*, which Alameda County Environmental Health (ACEH) staff approved in their December 29, 2005 correspondence.

December 2005 – Door-to-Door Survey: Cambria conducted a door-to-door survey within 300-feet of the subject site for wells, basements, and foundation type to identify building construction and potential vapor receptors. Questionnaires were sent to 110 properties and responses for 25 properties were received as of January 13, 2006. Tabulated data and a list of properties included in the survey, and which completed surveys were received was included in our *Door to Door Survey Report, Access Agreement Update, and Status/Schedule Update* submittal dated January 15, 2006. Of the 25 responses received, none of the properties had basements. Three properties were denoted as vacant; nine properties contained buildings constructed with slab-on-grade foundations; three contained buildings constructed with perimeter foundations. Responses for the other 10 properties were either left blank, marked as unknown, or the response was contradictory or unclear. Regarding underground storage tanks, 17 responses were negative, four responses were marked as "unknown", and four responses were left blank. With the exception of the monitoring wells at the subject site, no wells were identified through the survey activities.

January 2006 – Subsurface Investigation: On January 3 and 4, 2006, Cambria advanced three monitoring wells (MW-6 through MW-8), one soil boring (B-23), and six soil vapor probes (VP-1 through VP-6). In soil, TPHg was detected from borings MW-6 at 10.0 and 15.5 fbg, MW-7 at 11.5 and 16.5 fbg, MW-8 at 10.5 and 19 fbg, and B-23 at 10, 15.5, and 19.5 fbg at concentrations ranging from 7.1 to 3,800 mg/kg. Benzene was detected from borings MW-6 at 19.5 fbg, MW-8 at 19.5 fbg, and B-23 at 15.5 and 19.5 fbg at concentrations ranging from 0.0090 to 33 mg/kg. The vapor probes were not installed due to saturated soil conditions. A complete discussion and

presentation of these activities and findings is included in Cambria's April 14, 2006 *Site Investigation Report, and First Quarter 2006 – Groundwater Monitoring Report.*

January 2006 – DPE Pilot Test: Cambria conducted a five-day dual-phase extraction pilot test the week of January 16, 2006. The details and results were presented in Cambria's *Pilot Test Report* dated March 14, 2006. DPE was performed on wells V-1, V-2, MW-6, MW-7, MW-4, MW-5, and MW-8. On January 20, 2006, a constant vacuum DPE test was conducted on well MW-6. The report concluded **1)** the absence of vapor phase concentrations (and groundwater concentrations) from well V-1 indicates that the former UST excavation does not contain residual source material; **2)** high sustained and increasing vapor concentrations suggest source material is present in the vicinity of wells V-2, MW-5, and MW-8; **3)** variability in extraction flow rates across the site may reflect heterogeneities in subsurface soils or may suggest preferential pathways; and **4)** the extremely high effective radius of influence calculated for wells MW-5 and MW-8 during DPE testing on well MW-7 supports the presence of a preferential pathway in the vicinity of these wells. The data from the DPE pilot test suggests that DPE is feasible at this site. The groundwater table was effectively drawn down by DPE and moderate vapor extraction flow rates were yielded from some of the extraction points. Although DPE is deemed feasible, Cambria did not recommend implementing DPE at this site. The extraction points that yielded the highest vapor concentrations did not yield an effective vapor extraction flow rate. Conversely, low vapor concentrations were yielded from the extraction point that did yield an effective vapor extraction flow rate. Therefore, DPE is not considered feasible in the target areas at this site.

February 2006 – Install Offsite Wells MW-12 and MW-14: The December 20, 2005 *Plume Delineation Work Plan* proposed offsite activities including the installation of seven offsite monitoring wells and eight soil vapor probes. Based on responses from only two of the offsite property owners, Cambria completed a portion of the scope of work recommended. Monitoring wells MW-12 and MW-14 were installed at two offsite properties to 20 and 14.5 fbg, respectively. Groundwater was first encountered during drilling activities in borings MW-12 and MW-14 at 14.0 and 11.0 fbg, respectively. None of the soil samples from well MW-12 indicated the presence of any TPHg or BTEX. The 5-fbg sample from MW-14 also did not contain any reportable concentrations. TPHg was reported in the 10- and 14-fbg samples from MW-14 at concentrations of 32 and 970 mg/kg, respectively. Benzene was reported in the same two samples at concentrations of 0.0083 and 2.3 mg/kg, respectively. Fuel oxygenates were requested on the 10-fbg and 14-fbg soil samples from MW-14, and none were reported above the detection limits. These activities are documented in Cambria's May 25, 2006 *Subsurface Investigation Report.*

April 2006 – Survey and Site Visit: In addition to surveying the new wells, Cambria identified historical boring locations from patches on the ground surface, historical excavation edges, trenches, and other site features, and requested that they be included in the survey. Report figures since May 2006 have included the new survey data. Also, during the site visit, an inspection inside the building identified two bathrooms. A floor drain was observed in the northern-most bathroom. Standing liquid was present in the floor drain and automotive parts and cleaners were stored in this area. Thus, a sample from the floor drain was collected and submitted for analyses of volatile organic compounds (VOCs) by EPA Method 8260 and semi-volatile organic compounds (SVOCs) by EPA Method 8270. The floor drain sample was analyzed for VOCs and SVOCs. The results indicated the presence of carbon disulfide (3.69 µg/l), ethylbenzene (0.610 µg/l) and toluene (0.770 µg/l). This information was reported in Cambria's May 25, 2006 *Subsurface Investigation Report.*

May 2006 – Geophysical Survey: As recommended in Cambria's May 25, 2006 *Subsurface Investigation Report*, a geophysical study was performed on May 22, 2006. The objectives of this effort were to determine whether or not a waste oil UST was in the ground in the northwest portion of the property, and to evaluate the presence of subsurface utilities in this area that may act as preferential pathways, including the mapping of the sewer line from the floor drain found inside the northwest corner of the building during the April 19, 2006 site inspection. The results did not identify the presence of a UST on the northwest corner of the site, but did find another vent line located behind the northeast corner of the station building. A subsurface electric line was traced from the station building to the western property boundary, and an unidentified subsurface utility was traced from the northwest corner of the station building to the southwest, near MW-5 and toward MW-6. The presence of the unknown utility line in the northwest corner confirms the observations of a possible preferential pathway in this area based on the dual-phase extraction pilot test performed in January 2006. NORCAL was unable to run a line down the floor drain inside of the building due to the trap in the line, so the sewer cleanout was found on the exterior of the building. Accessing the cleanout would have resulted in damage to the cap, and the property owner would not grant permission for Cambria to open the cleanout and repair any damage. Thus, the location, direction, and depth of the sewer line in this area are still unknown. However, based on the GPR survey that was performed to try to locate a non-metallic sewer line, NORCAL concludes that the sewer line may be more than 4 feet below grade, since the GPR was unable to identify the line. This information was presented in Cambria's July 25, 2006 *Status Update, Report of Geophysical Survey, and Request for Agency Meeting.*

ATTACHMENT A
Site History
Former Shell Service Station
2703 Martin Luther King Jr. Drive
Oakland, CA

August 2006 – Agency Meeting: On August 2, 2006, a meeting between Shell and the ACEH was held to discuss results of recent activities, the status of pending activities, and an agreed upon course for proposed additional activities. During that meeting, the parties agreed to a scope of work, which was presented in Cambria's August 31, 2006 *Subsurface Investigation Work Plan*. The objectives detailed in that work plan were to:

- Obtain detailed lithologic information onsite and offsite by continuous sampling using electronic logging by cone penetration testing (CPT) technique in five onsite and five offsite borings labeled CPT-1 through CPT-10;
- Collect shallow soil gas samples from approximately 5 feet below grade (fbg) near offsite monitoring well MW-14 (CPT-8);
- Obtain groundwater samples from first encountered groundwater from areas where wells have not been installed (CPT-5 through CPT-7, CPT-9, and CPT-10);
- Collect groundwater from deeper within the first aquifer at all locations from approximately 20-25 fbg, depending on the CPT log results;
- Collect groundwater samples from a deeper interval at select locations for vertical groundwater profiling (CPT-4, CPT-6, CPT-8, and CPT-9);
- Install the onsite vapor probes to allow for the future collection of soil gas samples near the western property boundary;
- Collect ambient air samples from the above-ground basement area at 664 27th Street for chemical analysis.

This scope of work was approved by the ACEH in correspondence dated September 5, 2006.

October 2006 – CPT-1 through CPT-5and VP-1 through VP-6: Cambria installed CPT-1 through CPT-5 and VP-1 through VP-6 on the subject site. Offsite borings were not successful due to concerns about property damage (CPT-8 and CPT-9), and utility conflicts (CPT-6 and CPT-7), and lack of access agreement (CPT-10). There was a lack of adequate groundwater recharge for many of the groundwater samples attempted between 15 and 29 fbg. Groundwater sample results from between 31-37 fbg confirm significant attenuation of contaminants of at least one order of magnitude from the interval monitored by the site wells (5-20 fbg), thus nor further vertical delineation is warranted. Comparison of data from 1995, 2000, and 2006 in similar location (B-6 & B-9, B-19, and CPT-5, respectively) demonstrates attenuation of contaminant concentrations over time is occurring. The six onsite vapor probes could not be sampled due to the presence of water in some of the probes. A site inspection at the neighboring property was performed and revealed that due to significant ventilation and air exchange with outdoor ambient air, vapor sampling within the above-ground basement was no longer warranted. These activities are documented in Cambria's January 31, 2007 *CPT Investigation and Vapor Probe Installation Report*.

ATTACHMENT A
Site History
Former Shell Service Station
2703 Martin Luther King Jr. Drive
Oakland, CA

1996 to Present – Ongoing Groundwater Monitoring: Quarterly groundwater monitoring has been ongoing at the site since August 1996 and currently includes onsite monitoring wells MW-1 through MW-8, VP-1, and VP-2, and offsite monitoring wells MW-12 and MW-14. Fuel oxygenates are not a significant component of the groundwater plumes, although some detections of di-isopropyl ether and tertiary butyl alcohol have been observed. Overall, the groundwater flow direction is primarily to the west, with some radial components on site to the northwest and southwest. Historically, monitoring wells MW-1, MW-2, MW-3, and MW-12 have shown little or no impact from petroleum hydrocarbons. Maximum historical concentrations of TPHg and benzene have been observed in onsite monitoring well MW-5. The Second Quarter 2007 sample event (May) reported maximum concentrations of TPHg and benzene at 94,000 and 6,400 µg/l, respectively in well MW-5. Downgradient monitoring well MW-14 reported TPHg and benzene at 35,000 and 1,100 µg/l, respectively, for this same event.

Attachment B

Permits

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 04/12/2007 By jamesy

Permit Numbers: W2007-0522 to W2007-0523
Permits Valid from 05/16/2007 to 05/18/2007

Application Id: 1176308605119
Site Location: 2703 MLK Jr. Way, Oakland, CA
Project Start Date: 05/16/2007

City of Project Site: Oakland

Completion Date: 05/18/2007

Applicant: Conestoga Rovers & Associates - Matthias Kennerknecht
5900 Hollis St #A, Emeryville, CA 94608
Phone: 510-429-3308

Property Owner: Shell Oil Products (OS)
20945 S Wilmington Avenue, Carson, CA 90810
Phone: --

Client: ** same as Property Owner **

Total Due: $400.00
Receipt Number: WR2007-0165 **Total Amount Paid:** $400.00
Payer Name : Conestoga Rovers Associates Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Remedian Well Construction-Extraction - 2 Wells
Driller: Gregg Drilling - Lic #: 485165 - Method: other

Work Total: $200.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2007-0522	04/12/2007	08/14/2007	VP-7	3.25 in.	0.00 in.	0.00 ft	6.00 ft
W2007-0522	04/12/2007	08/14/2007	VP-8	3.25 in.	0.00 in.	2.00 ft	6.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall contact James Yoo for an inspection time at 510-670-6633 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

6. Minimum surface seal thickness is two inches of cement grout placed by tremie

7. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

Borehole(s) for Investigation-Geotechnical Study/CPT's - 3 Boreholes
Driller: Gregg Drilling - Lic #: 485165 - Method: other **Work Total: $200.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2007-0523	04/12/2007	08/14/2007	3	2.00 in.	40.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact James Yoo for an inspection time at 510-670-6633 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

6. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

Permit valid for 90 days from date of issuance

PERMIT NUMBER	SITE ADDRESS/LOCATION
X 0 7 0 0 4 3 2 *	2703 MARTIN LUTHER KING JR OAKLAND

APPROX. START DATE	APPROX. END DATE	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number)

CONTRACTOR'S LICENSE # AND CLASS	CITY BUSINESS TAX #
C57 - 485165	

ATTENTION

1- State law requires that the contractor/owner call Underground Service Alert (USA) two working days before excavating. This permit is not valid unless applicant has secured an inquiry-identification number issued by USA. The USA telephone number is 1-800-642-2444. Underground Service Alert (USA) # _____

2- 48 hours prior to starting work, you MUST CALL (510) 238-3651 to schedule an inspection.

3- 48 hours prior to re-paving, a compaction certificate is required (waived for approved slurry backfill).

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code)

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project. (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law.)

☐ I am exempt under Sec. _____, B&PC for this reason _____

WORKER'S COMPENSATION

☐ I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # _____ Company Name _____

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Title 12 Chapter 12.12 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

X _____ 5/1/07

Signature of Permittee ☐ Agent for ☐ Contractor ☐ Owner Date

DATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☐ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☐ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☐ YES ☐ NO

ISSUED BY	DATE ISSUED

CITY OF OAKLAND • Community and Economic Development Agency

250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job site 2703 M L KING JR WY Parcel# 009 -0691-003-01 App1# X0700432

Descr soil boring on 27th St Application must be routed to the Fire Department Hazardous Materials Management Program for review and approval Permit Issued 05/01/07

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:

Util Fund #:

	Applnt	Phone#	Lic#	License Classes
Owner KWAN RODNEY & JANET				
Contractor CREGG DRILLING & TESTING, INC	X	(925)313-5800	485165	C57
Arch/Engr				
Agent CONESTOGA-ROVERS/M KENNER		(510)453-0005		

Applic Addr 950 HOWE RD, MARTINEZ, CA 94553

$414.25 TOTAL FEES PAID AT ISSUANCE

$61.00 Applic	$300.00 Permit
$.00 Process	$34.30 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$18.95 Tech Enh

JOB SITE

ADDRESS

CITY OF OAKLAND

DIST

Date: 05/01/07 Amt Paid: $897.35

By: SKJ Register R03 Receipt# 117626

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job Site 2703 M L KING JR WY Parcel# 009 -0691-003-01 Appl# OB070310

Block lane on 27th St per approved TCP soil boring on 27th S Permit Issued 05/01/07
Fire Department Hazardous Materials Management
Program for review and approval

Nbr of days: 3 Linear feet: 200
Effective: 05/16/07 Expiration: 05/18/07

SHORT TERM NON-METERED

	Applcnt	Phone#	Lic#	License Classes
Owner	KWAN RODNEY & JANET			
Contractor	GREGG DRILLING & TESTING, INC	X	(925) 313-5800	485165 C57
Arch/Engr				
Agent	CONESTOGA-ROVERS/M KENNER		(510) 453-0005	
Applic Addr	950 HOWE RD, MARTINEZ, CA, 94553			

$483.10 TOTAL FEES PAID AT ISSUANCE

$61.00 Applic	$360.00 Permit
$.00 Process	$40.00 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$22.10 Tech Enh

JOB SITE

ADDRESS

CITY OF OAKLAND

DIST

TCP needs to be approved by Transportation Services every 30 days or whenever deviated from the previously approved plan.

Applicant: _____ _____

Issued by: _____ _____

Date: 05/01/07 Amt Paid: $897.35
By: SKJ Register R03 Receipt# 117626

CITY OF OAKLAND

Community & Economic Development Agency
250 Frank H. Ogawa Pl, Oakland CA, 94612
Phone: (510)238-3587 FAX: (510)238-2263

PAYMENT RECEIPT

Application#: OB070310	Payment#: 001
APPLICATION FEE	$61.00
OBSTRUCTION PERMIT	$360.00
RECORDS MANAGEMENT FEE (	$40.00
TECHNOLOGY ENHANCEMENT FE	$22.10
Subtotal:	$483.10

Application#: X0700432	Payment#: 001
APPLICATION FEE	$61.00
EXCAVATION PERMIT	$300.00
RECORDS MANAGEMENT FEE	$34.30
TECHNOLOGY ENHANCEMENT FE	$18.95
Subtotal:	$414.25

Sales Tax:	$.00
****** TOTAL PAID:	$897.35
Check Payment:	$897.35

Payor: CONESTOGA-ROVERS 10022
Date: 05/01/07 Time: 09:20:36
By: SKJ Register R03 Receipt# 117626

****
ORIGINAL RECEIPT REQUIRED FOR REFUND
****

Attachment C

Gregg Insitu, Inc.
CPT Site Investigation Report

GREGG IN SITU, INC.

GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

May 21, 2007

Conestoga-Rovers & Associates
Attn: Ana Friel
408 Seventh St., Suite A
Eureka, California 95501

Subject: CPT Site Investigation
Former Shell Service Station
Oakland, California
GREGG Project Number: 07-160MA

Dear Ms. Friel:

The following report presents the results of GREGG Drilling & Testing's Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	☒
2	Pore Pressure Dissipation Tests	(PPD)	☒
3	Seismic Cone Penetration Tests	(SCPTU)	☐
4	Resistivity Cone Penetration Tests	(RCPTU)	☐
5	UVIF Cone Penetration Tests	(UVIFCPTU)	☐
6	Groundwater Sampling	(GWS)	☒
7	Soil Sampling	(SS)	☒
8	Vapor Sampling	(VS)	☐
9	Vane Shear Testing	(VST)	☐
10	SPT Energy Calibration	(SPTE)	☐

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (925) 313-5800.

Sincerely,
GREGG Drilling & Testing, Inc.

Mary Walden
Operations Manager

Cone Penetration Test Sounding Summary

-Table 1-

CPT Sounding Identification	Date	Termination Depth (Feet)	Depth of Groundwater Samples (Feet)	Depth of Soil Samples (Feet)	Depth of Pore Pressure Dissipation Tests (Feet)
CPT-06	5/17/07	40	17NR, 25	18	-
CPT-07	5/17/07	40	14NR, 22NR	-	33.6

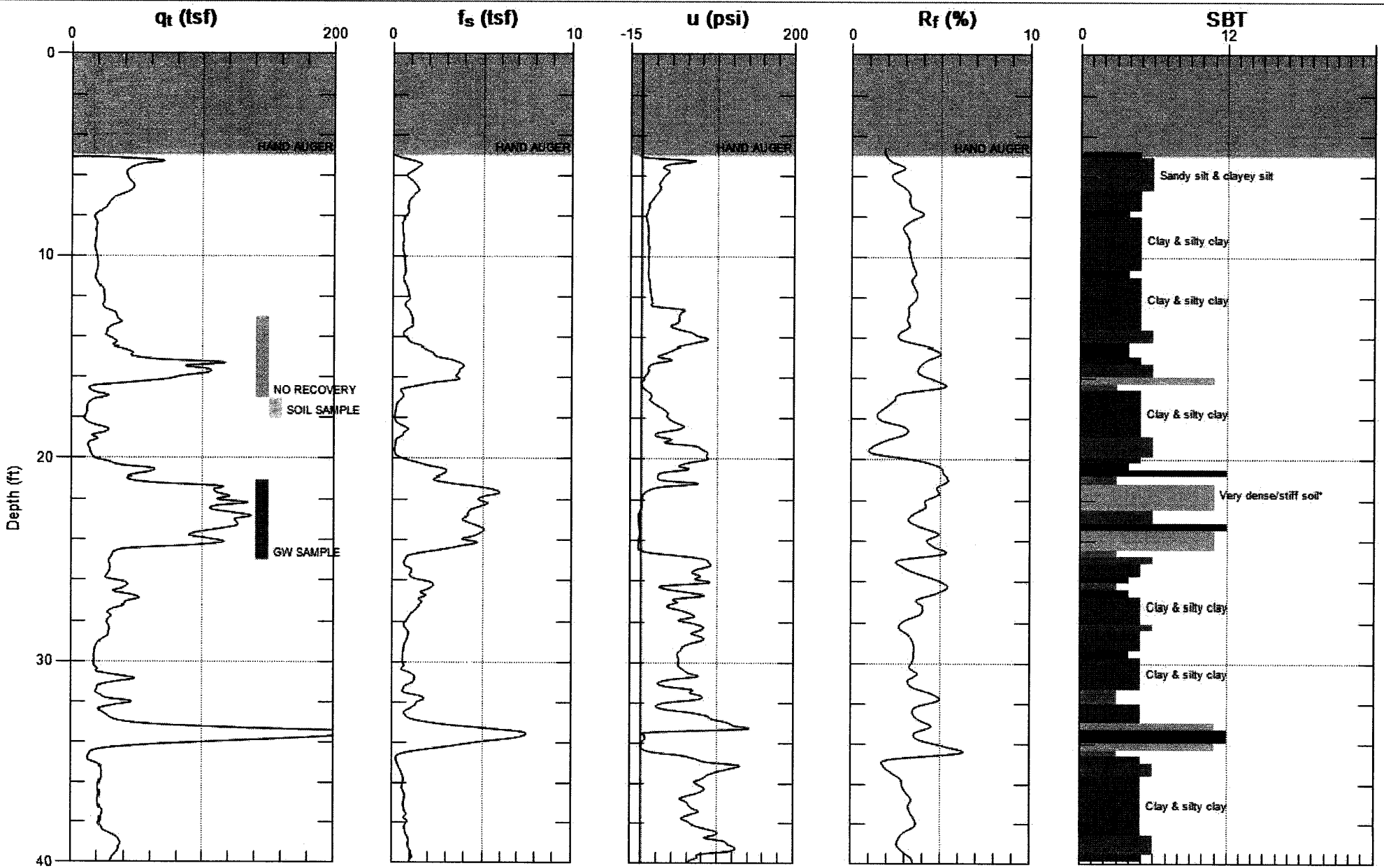
950 Howe Rd • Martinez, California 94553 • (925) 313-5800 • FAX (925) 313-0302
OTHER OFFICES: LOS ANGELES • HOUSTON • SOUTH CAROLINA
www.greggdrilling.com

GREGG

CONESTOGA-ROVERS

Site: FMR. SHELL STATION **Engineer: A.FRIEL**

Sounding: CPT-06 **Date: 5/17/2007 12:23**



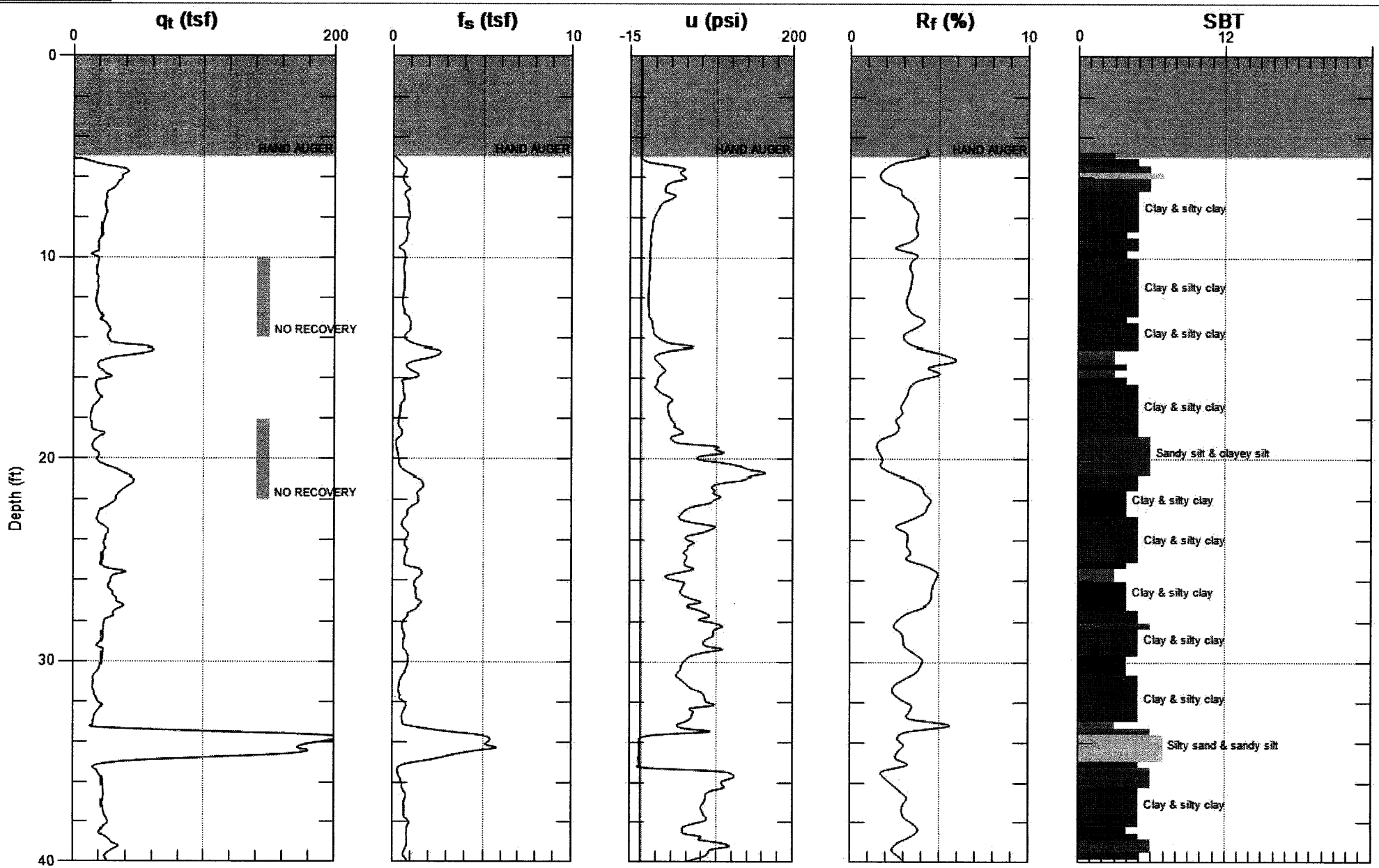
Max. Depth: 40.190 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

CONESTOGA-ROVERS

Site: FMR. SHELL STATION **Engineer: A.FRIEL**

Sounding: CPT-07 **Date: 5/17/2007 09:12**



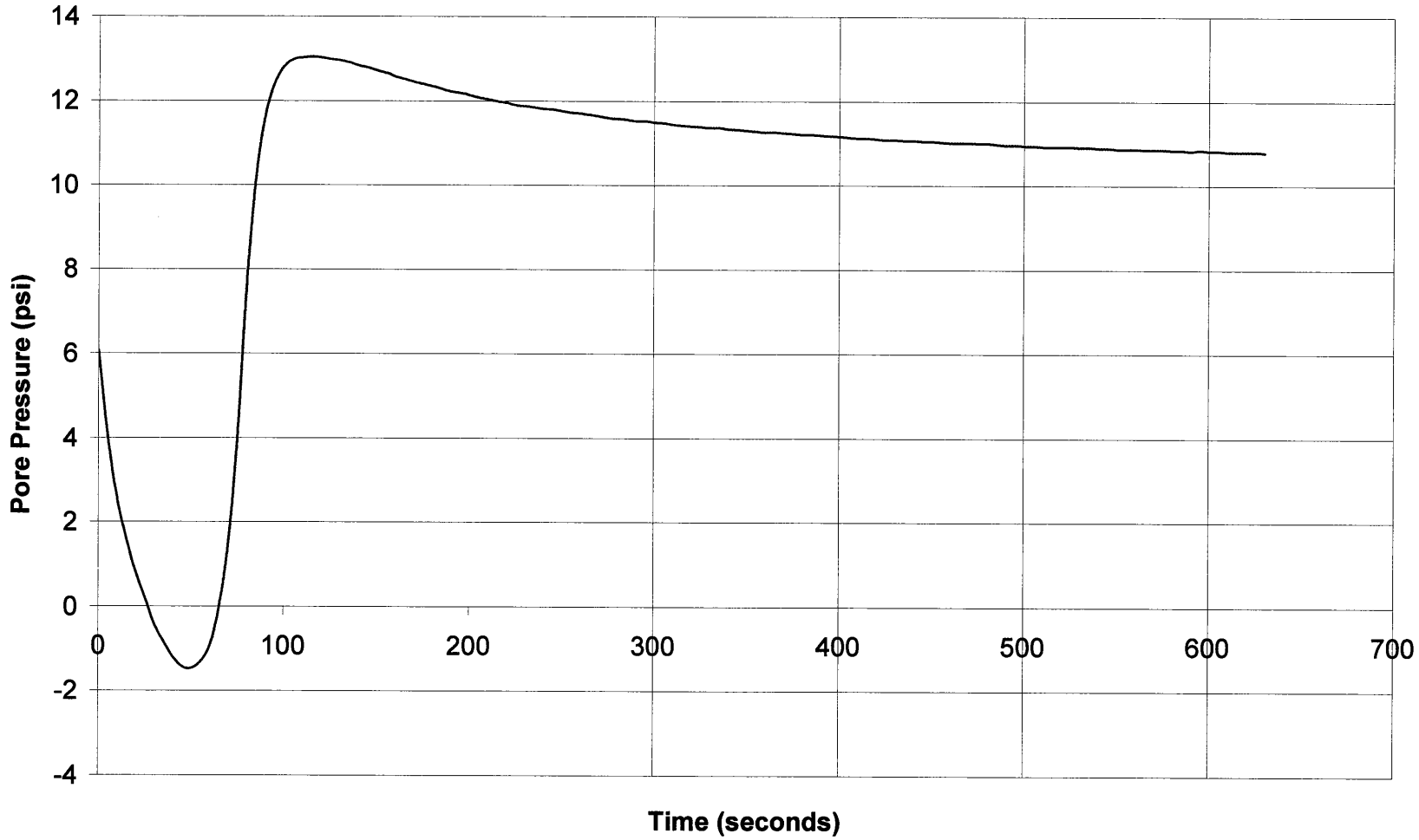
Max. Depth: 40.190 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG DRILLING & TESTING

Pore Pressure Dissipation Test

Sounding: CPT-07
Depth: 33.629
Site: FMR SHELL
Engineer: A.FRIEL



APPENDIX CPT

Cone Penetration Testing Procedure (CPT)

Gregg Drilling & Testing, Inc. carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*. The soundings were conducted using a 20 ton capacity cone with a tip area of 15 cm^2 and a friction sleeve area of 225 cm^2. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.85.

The cone takes measurements of cone bearing (q_c), sleeve friction (f_s) and penetration pore water pressure (u_2) at 5-cm intervals during penetration to provide a nearly continuous hydrogeologic log. CPT data reduction and interpretation is performed in real time facilitating on-site decision making. The above mentioned parameters are stored on disk for further analysis and reference. All CPT soundings are performed in accordance with revised (2002) ASTM standards (D 5778-95).

The cone also contains a porous filter element located directly behind the cone tip (u_2), *Figure CPT*. It consists of porous plastic and is 5.0mm thick. The filter element is used to obtain penetration pore pressure as the cone is advanced as well as Pore Pressure Dissipation Tests (PPDT's) during appropriate pauses in penetration. It should be noted that prior to penetration, the element is fully saturated with silicon oil under vacuum pressure to ensure accurate and fast dissipation.

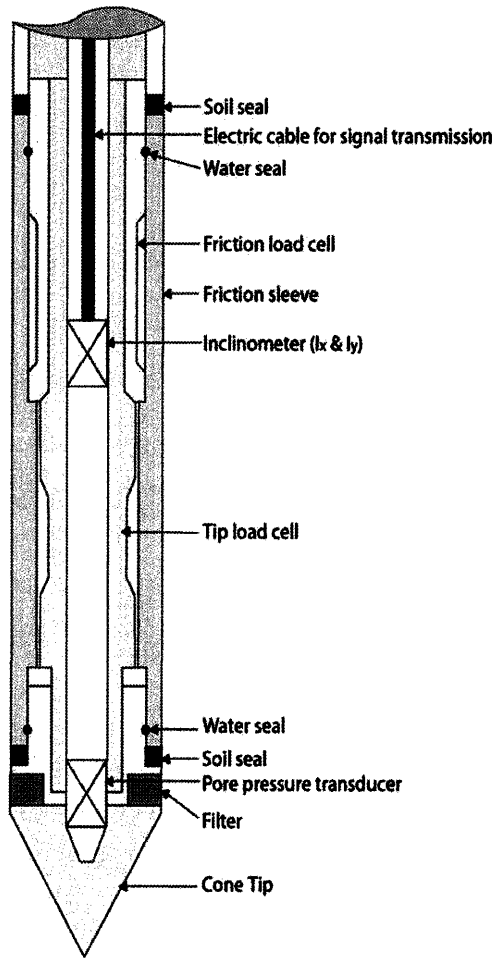


Figure CPT

When the soundings are complete, the test holes are grouted using a Gregg In Situ support rig. The grouting procedures generally consist of pushing a hollow CPT rod with a "knock out" plug to the termination depth of the test hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.

Cone Penetration Test Data & Interpretation

Soil behavior type and stratigraphic interpretation is based on relationships between cone bearing (q_c), sleeve friction (f_s), and pore water pressure (u_2). The friction ratio (R_f) is a calculated parameter defined by $100f_s/q_c$ and is used to infer soil behavior type. Generally:

Cohesive soils (clays)

- High friction ratio (R_f) due to small cone bearing (q_c)
- Generate large excess pore water pressures (u_2)

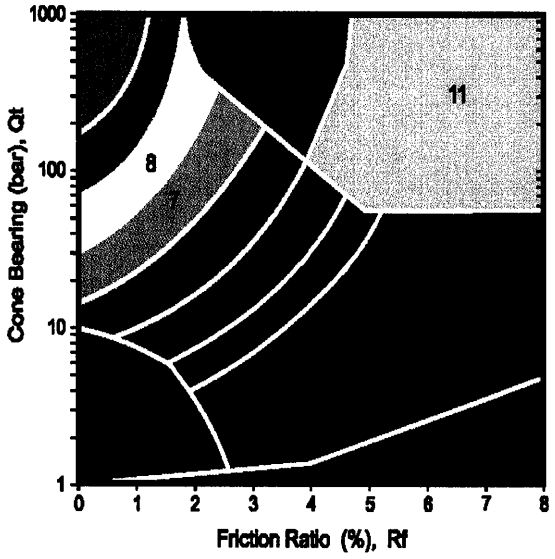
Cohesionless soils (sands)

- Low friction ratio (R_f) due to large cone bearing (q_c)
- Generate very little excess pore water pressures (u_2)

A complete set of baseline readings are taken prior to and at the completion of each sounding to determine temperature shifts and any zero load offsets. Corrections for temperature shifts and zero load offsets can be extremely important, especially when the recorded loads are relatively small. In sandy soils, however, these corrections are generally negligible.

The cone penetration test data collected from your site is presented in graphical form in Appendix CPT. The data includes CPT logs of measured soil parameters, computer calculations of interpreted soil behavior types (SBT), and additional geotechnical parameters. A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Soil interpretation for this project was conducted using recent correlations developed by Robertson et al, 1990, *Figure SBT*. Note that it is not always possible to clearly identify a soil type based solely on q_c, f_s, and u_2. In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the soil behavior type.



ZONE	Qt/N	SBT
1	2	Sensitive, fine grained
2	1	Organic materials
3	1	Clay
4	1.5	Silty clay to clay
5	2	Clayey silt to silty clay
6	2.5	Sandy silt to clayey silt
7	3	Silty sand to sandy silt
8	4	Sand to silty sand
9	5	Sand
10	6	Gravely sand to sand
11	1	Very stiff fine grained*
12	2	Sand to clayey sand*

*over consolidated or cemented

Figure SBT

APPENDIX PPD

Pore Pressure Dissipation Tests (PPDT)

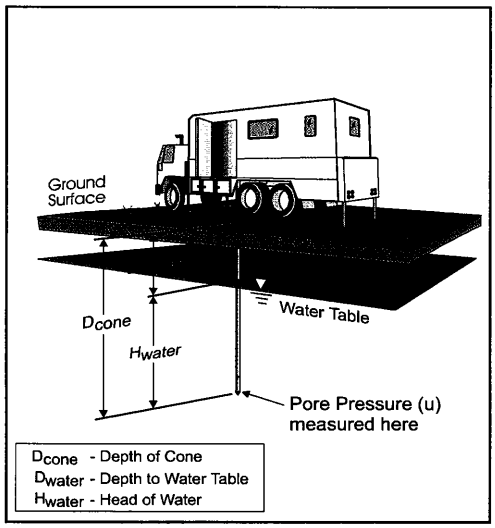
Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals measured hydrostatic water pressures and determined the approximate depth of the ground water table. A PPDT is conducted when the cone is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (u) with time is measured behind the tip of the cone and recorded by a computer system.
Pore pressure dissipation data can be interpreted to provide estimates of:

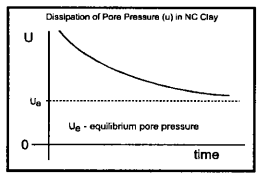
- Equilibrium piezometric pressure
- Phreatic Surface
- In situ horizontal coefficient of consolidation (c_h)
- In situ horizontal coefficient of permeability (k_h)

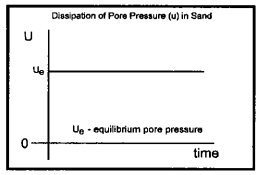
In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until such time as there is no variation in pore pressure with time, *Figure PPDT*. This time is commonly referred to as t_{100}, the point at which 100% of the excess pore pressure has dissipated.

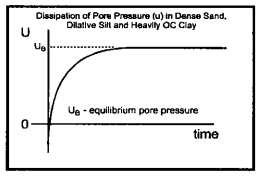
A complete reference on pore pressure dissipation tests is presented by Robertson et al. 1992.

A summary of the pore pressure dissipation tests is summarized in Table 1. Pore pressure dissipation data is presented in graphical form in Appendix PPDT.









Water Table Calculation

$$D_{water} = D_{cone} - H_{water}$$

where $H_{water} = U_e$ (depth units)

Useful Conversion Factors: 1psi = 0.704m = 2.31 feet (water)
1tsf = 0.958 bar = 13.9 psi
1m = 3.28 feet

Figure PPDT

APPENDIX SS

Soil Sampling (SS)

Gregg In Situ, Inc. uses a piston-type sampler to obtain relatively undisturbed soil samples without generating any soil cuttings, *Figure SS*. Two different types of samplers (12 and 18 inch) are used depending on the soil type and density. The soil sampler is initially pushed in a "closed" position to the desired sampling interval using a hydraulic rig. Keeping the sampler closed minimizes the potential of cross contamination caused by sloughing. The inner tip of the sampler is then retracted 12 inches (or 18 inches if using the longer sampler) leaving a hollow soil sampler with two inner 1¼ inch diameter by 6 inch or four 3 inch long soil sample tubes. If using the 18 inch sampler, two 1½ inch diameter by 6 inch long tubes will be exposed. The hollow sampler is then pushed in a locked "open" position to collect a soil sample. The filled sampler and push rods are then retrieved to the ground surface. Because the soil enters the sampler at a constant rate, the opportunity for 100% recovery is increased. For environmental analysis, the soil sample tube ends are sealed with Teflon and plastic caps. Often, a longer "split tube" can be used for geotechnical sampling.

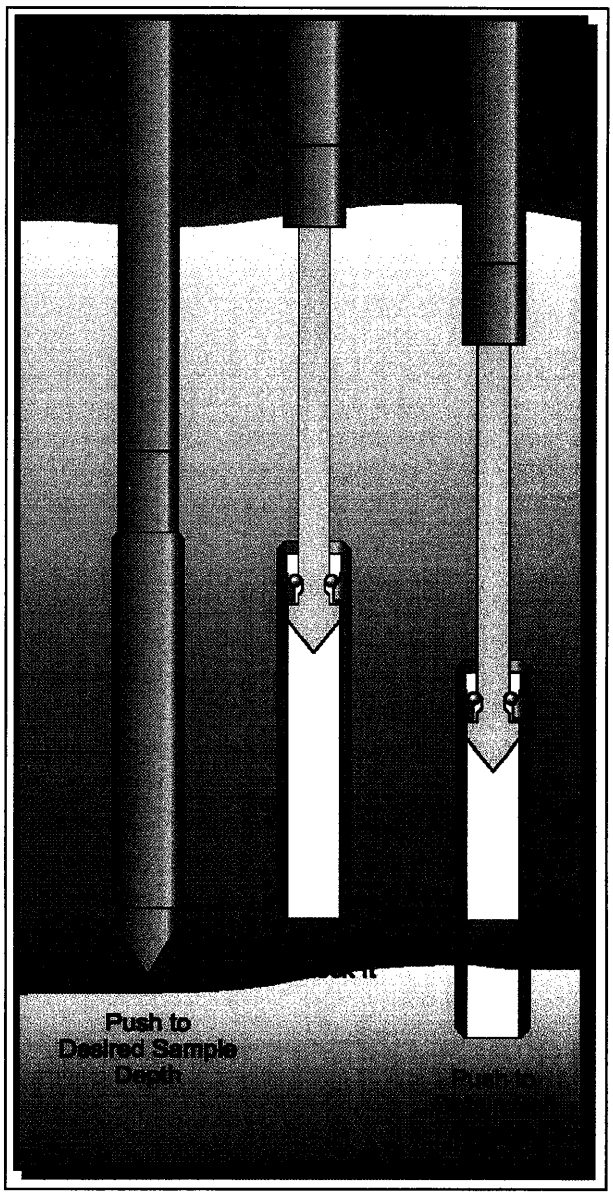


Figure SS

For a detailed reference on direct push soil sampling, refer to Robertson et al, 1998.

A summary of the soil samples collected, including the sampling date, depth and location identification, is presented in Table 1.

APPENDIX GWS

Groundwater Sampling (GWS)

Gregg In Situ, Inc. conducts groundwater sampling using a Hydropunch® type groundwater sampler, *Figure GWS*. The groundwater sampler has a retrievable stainless steel or disposable PVC screen with steel drop off tip. This allows for samples to be taken at multiple depth intervals within the same sounding location. In areas of slower water recharge, provisions may be made to set temporary PVC well screens during sampling to allow the drill rig to advance to the next sample location while the groundwater is allowed to infiltrate.

The groundwater sampler operates by advancing 1 ¾ inch hollow push rods with the filter tip in a closed configuration to the base of the desired sampling interval. Once at the desired sample depth, the push rods are retracted; exposing the encased filter screen and allowing groundwater to infiltrate hydrostatically from the formation into the inlet screen. A small diameter bailer (approximately ½ or ¾ inch) is lowered through the push rods into the screen section for sample collection. The number of downhole trips with the bailer and time necessary to complete the sample collection at each depth interval is a function of sampling protocols, volume requirements, and the yield characteristics and storage capacity of the formation. Upon completion of sample collection, the push rods and sampler, with the exception of the PVC screen and steel drop off tip are retrieved to the ground surface, decontaminated and prepared for the next sampling event.

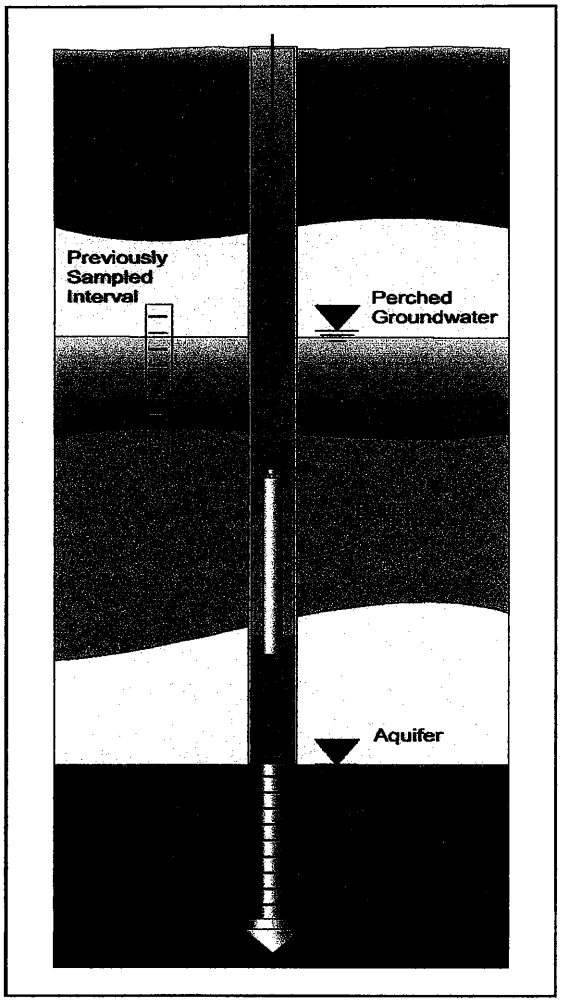


Figure GWS

A summary of the groundwater samples collected, including the sampling date, depth and location identification, is presented in Table 1 and the corresponding CPT plot.

For a detailed reference on direct push groundwater sampling, refer to Zemo et. al., 1992.

Bibliography

Lunne, T., Robertson, P.K. and Powell, J.J.M., "Cone Penetration Testing in Geotechnical Practice" E & FN Spon. ISBN 0 419 23750, 1997

Roberston, P.K., "Soil Classification using the Cone Penetration Test", Canadian Geotechnical Journal, Vol. 27, 1990 pp. 151-158.

Mayne, P.W., "NHI (2002) Manual on Subsurface Investigations: Geotechnical Site Characterization", available through www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/index.html, Section 5.3, pp. 107-112.

Robertson, P.K., R.G. Campanella, D. Gillespie and A. Rice, "Seismic CPT to Measure In-Situ Shear Wave Velocity", Journal of Geotechnical Engineering ASCE, Vol. 112, No. 8, 1986 pp. 791-803.

Robertson, P.K., Sully, J., Woeller, D.J., Lunne, T., Powell, J.J.M., and Gillespie, D.J., "Guidelines for Estimating Consolidation Parameters in Soils from Piezocone Tests", Canadian Geotechnical Journal, Vol. 29, No. 4, August 1992, pp. 539-550.

Robertson, P.K., T. Lunne and J.J.M. Powell, "Geo-Environmental Application of Penetration Testing", Geotechnical Site Characterization, Robertson & Mayne (editors), 1998 Balkema, Rotterdam, ISBN 90 5410 939 4 pp 35-47.

Campanella, R.G. and I. Weemees, "Development and Use of An Electrical Resistivity Cone for Groundwater Contamination Studies", Canadian Geotechnical Journal, Vol. 27 No. 5, 1990 pp. 557-567.

DeGroot, D.J. and A.J. Lutenegger, "Reliability of Soil Gas Sampling and Characterization Techniques", International Site Characterization Conference - Atlanta, 1998.

Woeller, D.J., P.K. Robertson, T.J. Boyd and Dave Thomas, "Detection of Polyaromatic Hydrocarbon Contaminants Using the UVIF-CPT", 53rd Canadian Geotechnical Conference Montreal, QC October pp. 733-739, 2000.

Zemo, D.A., T.A. Delfino, J.D. Gallinatti, V.A. Baker and L.R. Hilpert, "Field Comparison of Analytical Results from Discrete-Depth Groundwater Samplers" BAT EnviroProbe and QED HydroPunch, Sixth national Outdoor Action Conference, Las Vegas, Nevada Proceedings, 1992, pp 299-312.

Copies of ASTM Standards are available through www.astm.org

GREGG IN SITU, INC.

GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

June 11, 2007

CRA
Attn: Ana Friel
408 Seventh Street, Suite A
Eureka, CA 95501

Subject: CPT Site Investigation
Former Shell, 2703 MLK
Oakland, California
GREGG Project Number: 07-182MA

Dear Ms. Friel:

The following report presents the results of GREGG Drilling & Testing's Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	☒
2	Pore Pressure Dissipation Tests	(PPD)	☒
3	Seismic Cone Penetration Tests	(SCPTU)	☐
4	Resistivity Cone Penetration Tests	(RCPTU)	☐
5	UVIF Cone Penetration Tests	(UVIFCPTU)	☐
6	Groundwater Sampling	(GWS)	☒
7	Soil Sampling	(SS)	☒
8	Vapor Sampling	(VS)	☐
9	Vane Shear Testing	(VST)	☐
10	SPT Energy Calibration	(SPTE)	☐

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (925) 313-5800.

Sincerely,
GREGG Drilling & Testing, Inc.

Mary Walden
Operations Manager

Cone Penetration Test Sounding Summary

-Table 1-

CPT Sounding Identification	Date	Termination Depth (Feet)	Depth of Groundwater Samples (Feet)	Depth of Soil Samples (Feet)	Depth of Pore Pressure Dissipation Tests (Feet)
CPT-10	6/08/07	40	17, 23	15	16.4

GREGG

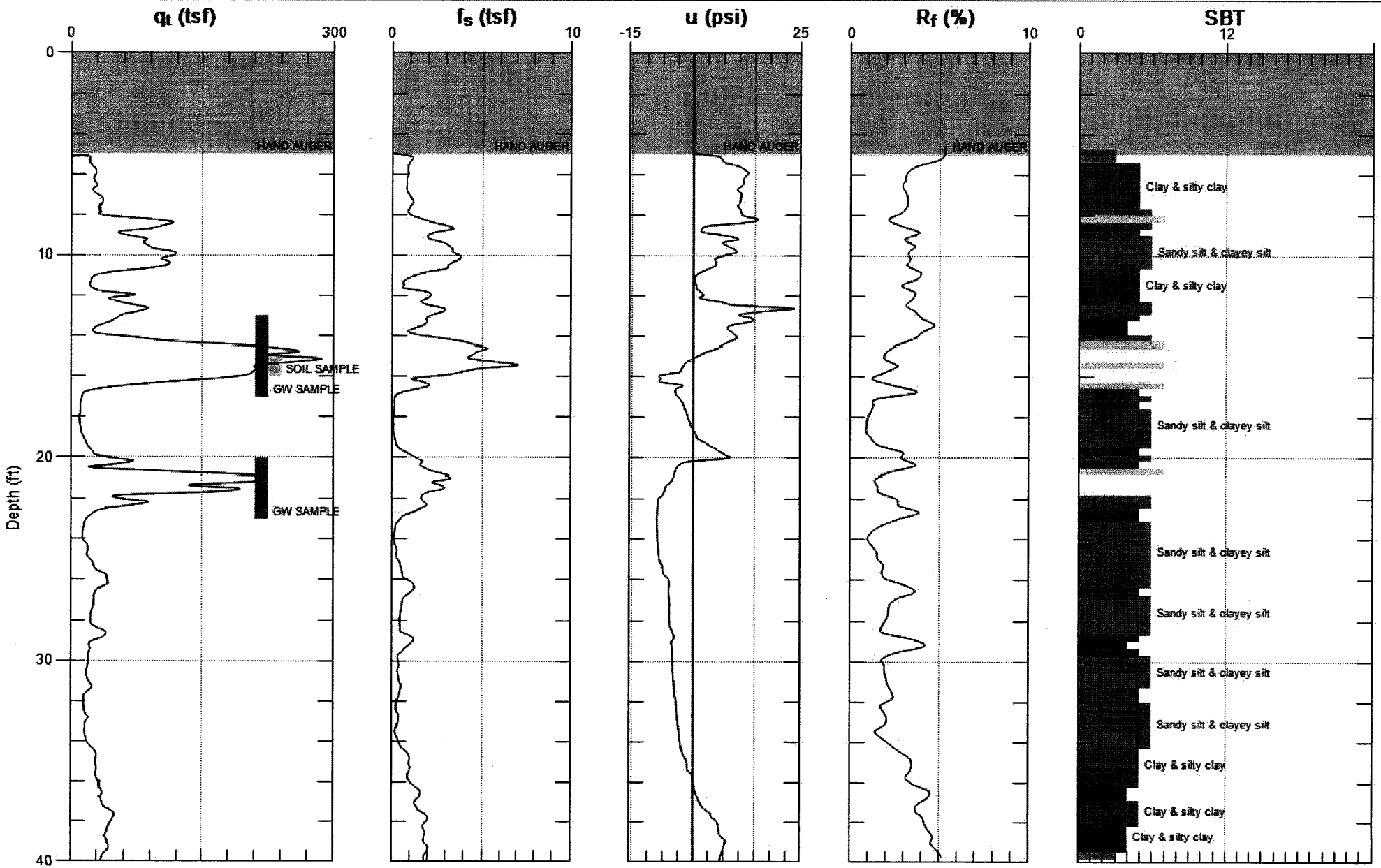
CRA

Site: 2703 MLK

Sounding: CPT-10

Engineer: A.FRIEL

Date: 6/8/2007 08:52



Max. Depth: 40.026 (ft)

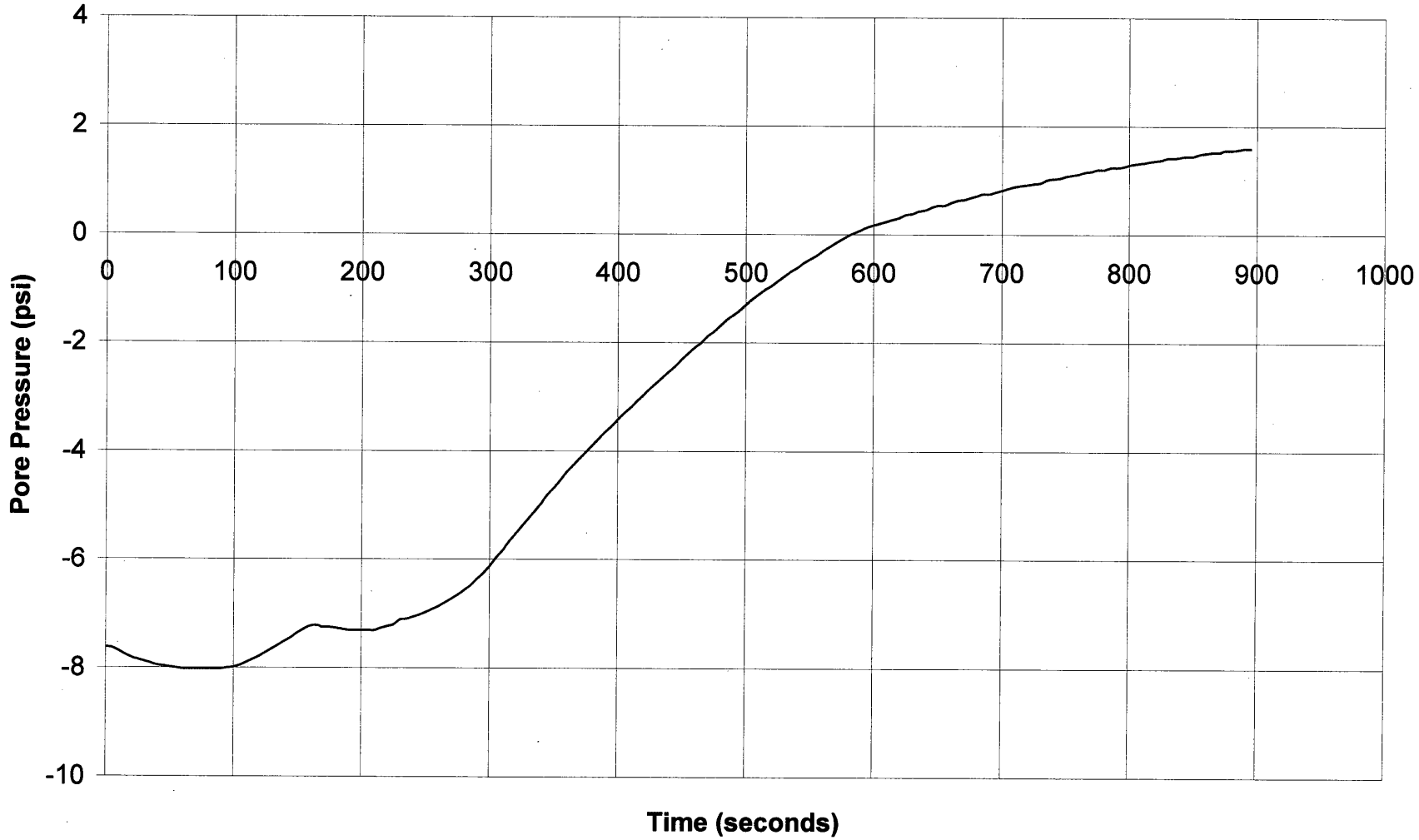
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG DRILLING & TESTING

Pore Pressure Dissipation Test

Sounding: CPT-10
Depth: 16.404
Site: 2703 MLK BLVD.
Engineer: A.FRIEL



APPENDIX CPT

Cone Penetration Testing Procedure (CPT)

Gregg Drilling & Testing, Inc. carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*. The soundings were conducted using a 20 ton capacity cone with a tip area of 15 cm^2 and a friction sleeve area of 225 cm^2. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.85.

The cone takes measurements of cone bearing (q_c), sleeve friction (f_s) and penetration pore water pressure (u_2) at 5-cm intervals during penetration to provide a nearly continuous hydrogeologic log. CPT data reduction and interpretation is performed in real time facilitating on-site decision making. The above mentioned parameters are stored on disk for further analysis and reference. All CPT soundings are performed in accordance with revised (2002) ASTM standards (D 5778-95).

The cone also contains a porous filter element located directly behind the cone tip (u_2), *Figure CPT*. It consists of porous plastic and is 5.0mm thick. The filter element is used to obtain penetration pore pressure as the cone is advanced as well as Pore Pressure Dissipation Tests (PPDT's) during appropriate pauses in penetration. It should be noted that prior to penetration, the element is fully saturated with silicon oil under vacuum pressure to ensure accurate and fast dissipation.

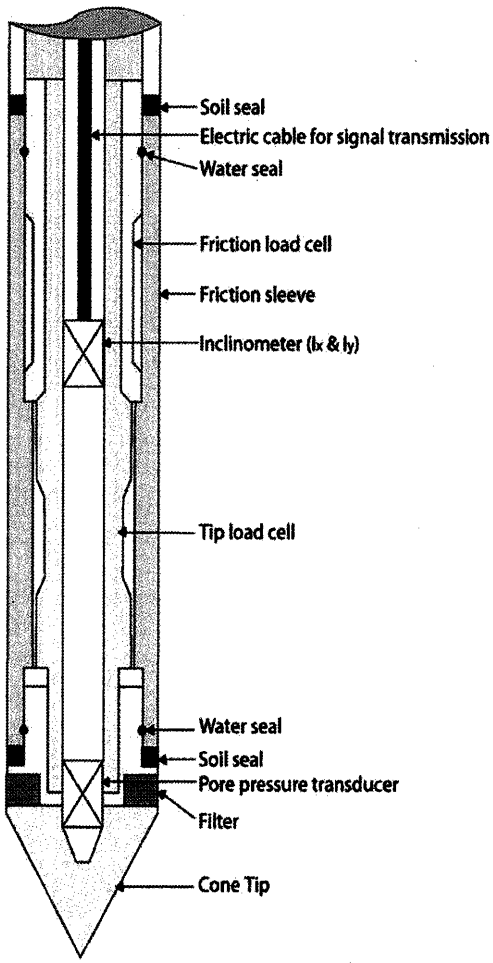


Figure CPT

When the soundings are complete, the test holes are grouted using a Gregg In Situ support rig. The grouting procedures generally consist of pushing a hollow CPT rod with a "knock out" plug to the termination depth of the test hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.

Cone Penetration Test Data & Interpretation

Soil behavior type and stratigraphic interpretation is based on relationships between cone bearing (q_c), sleeve friction (f_s), and pore water pressure (u_2). The friction ratio (R_f) is a calculated parameter defined by $100f_s/q_c$ and is used to infer soil behavior type. Generally:
Cohesive soils (clays)

- High friction ratio (R_f) due to small cone bearing (q_c)
- Generate large excess pore water pressures (u_2)

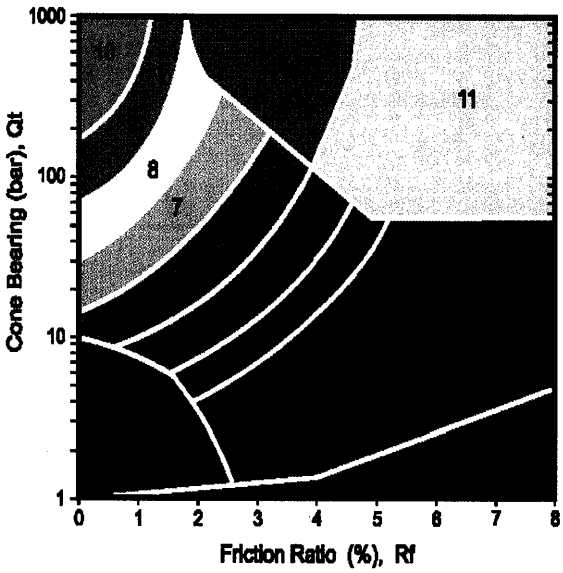
Cohesionless soils (sands)

- Low friction ratio (R_f) due to large cone bearing (q_c)
- Generate very little excess pore water pressures (u_2)

A complete set of baseline readings are taken prior to and at the completion of each sounding to determine temperature shifts and any zero load offsets. Corrections for temperature shifts and zero load offsets can be extremely important, especially when the recorded loads are relatively small. In sandy soils, however, these corrections are generally negligible.

The cone penetration test data collected from your site is presented in graphical form in Appendix CPT. The data includes CPT logs of measured soil parameters, computer calculations of interpreted soil behavior types (SBT), and additional geotechnical parameters. A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Soil interpretation for this project was conducted using recent correlations developed by Robertson, 1990, *Figure SBT*. Note that it is not always possible to clearly identify a soil type based solely on q_c, f_s, and u_2. In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the soil behavior type.



ZONE	Qt/N	SBT
1	2	Sensitive, fine grained
2	1	Organic materials
3	1	Clay
4	1.5	Silty clay to clay
5	2	Clayey silt to silty clay
6	2.5	Sandy silt to clayey silt
7	3	Silty sand to sandy silt
8	4	Sand to silty sand
9	5	Sand
10	6	Gravely sand to sand
11	1	Very stiff fine grained*
12	2	Sand to clayey sand*

*over consolidated or cemented

Figure SBT

APPENDIX PPD

Pore Pressure Dissipation Tests (PPDT)

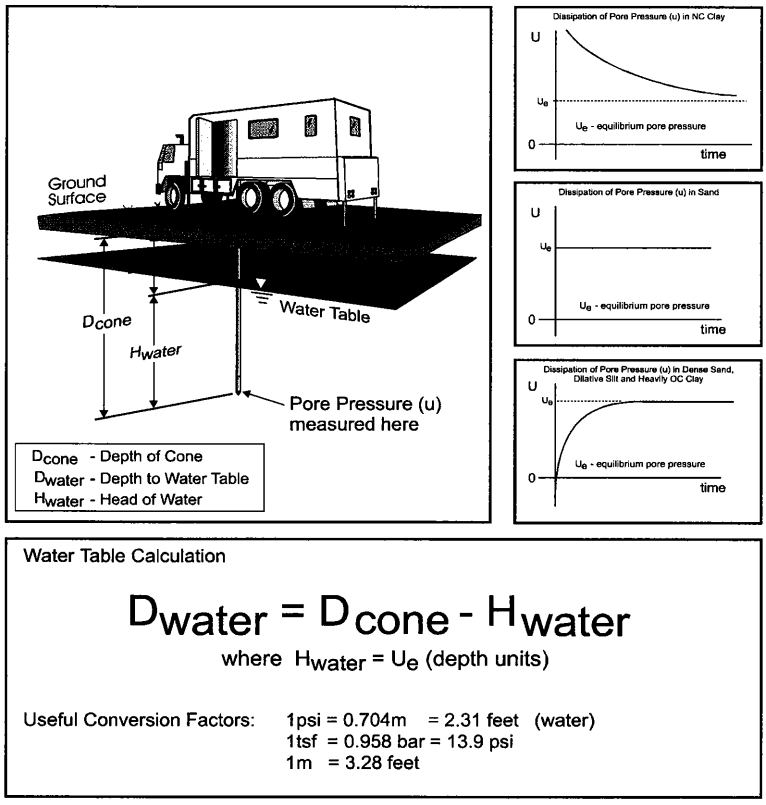
Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals measured hydrostatic water pressures and determined the approximate depth of the ground water table. A PPDT is conducted when the cone is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (u) with time is measured behind the tip of the cone and recorded by a computer system.
Pore pressure dissipation data can be interpreted to provide estimates of:

- Equilibrium piezometric pressure
- Phreatic Surface
- In situ horizontal coefficient of consolidation (c_h)
- In situ horizontal coefficient of permeability (k_h)

In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until such time as there is no variation in pore pressure with time, *Figure PPDT*. This time is commonly referred to as t_{100}, the point at which 100% of the excess pore pressure has dissipated.

A complete reference on pore pressure dissipation tests is presented by Robertson et al. 1992.

A summary of the pore pressure dissipation tests is summarized in Table 1. Pore pressure dissipation data is presented in graphical form in Appendix PPDT.



Water Table Calculation

$$D_{water} = D_{cone} - H_{water}$$

where $H_{water} = U_e$ (depth units)

Useful Conversion Factors: 1psi = 0.704m = 2.31 feet (water)
1tsf = 0.958 bar = 13.9 psi
1m = 3.28 feet

Figure PPDT

APPENDIX GWS

Groundwater Sampling (GWS)

Gregg In Situ, Inc. conducts groundwater sampling using a Hydropunch® type groundwater sampler, *Figure GWS*. The groundwater sampler has a retrievable stainless steel or disposable PVC screen with steel drop off tip. This allows for samples to be taken at multiple depth intervals within the same sounding location. In areas of slower water recharge, provisions may be made to set temporary PVC well screens during sampling to allow the drill rig to advance to the next sample location while the groundwater is allowed to infiltrate.

The groundwater sampler operates by advancing 1 ¾ inch hollow push rods with the filter tip in a closed configuration to the base of the desired sampling interval. Once at the desired sample depth, the push rods are retracted; exposing the encased filter screen and allowing groundwater to infiltrate hydrostatically from the formation into the inlet screen. A small diameter bailer (approximately ½ or ¾ inch) is lowered through the push rods into the screen section for sample collection. The number of downhole trips with the bailer and time necessary to complete the sample collection at each depth interval is a function of sampling protocols, volume requirements, and the yield characteristics and storage capacity of the formation. Upon completion of sample collection, the push rods and sampler, with the exception of the PVC screen and steel drop off tip are retrieved to the ground surface, decontaminated and prepared for the next sampling event.

A summary of the groundwater samples collected, including the sampling date, depth and location identification, is presented in Table 1 and the corresponding CPT plot.

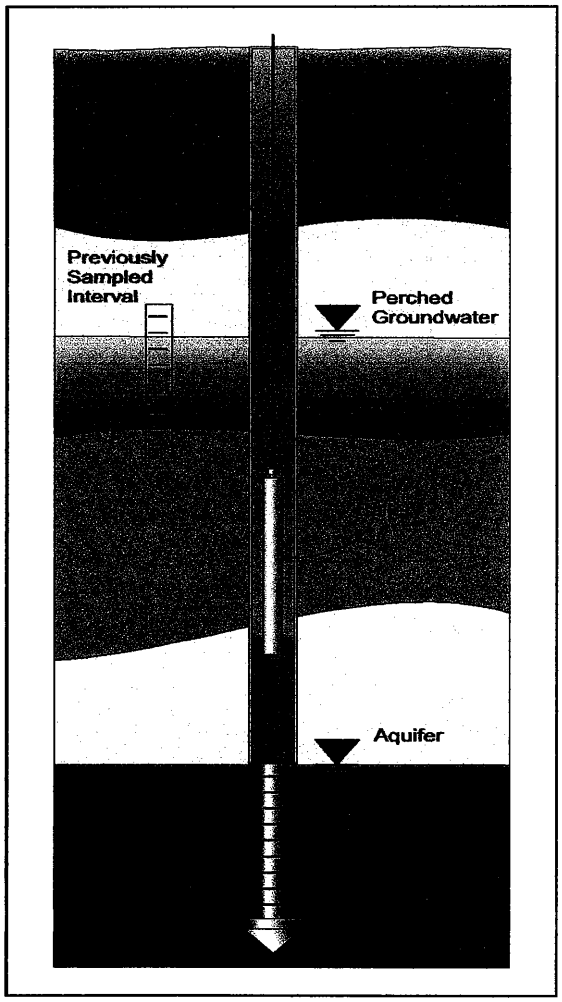


Figure GWS

For a detailed reference on direct push groundwater sampling, refer to Zemo et. al., 1992.

APPENDIX SS

Soil Sampling (SS)

Gregg In Situ, Inc. uses a piston-type sampler to obtain relatively undisturbed soil samples without generating any soil cuttings, *Figure SS*. Two different types of samplers (12 and 18 inch) are used depending on the soil type and density. The soil sampler is initially pushed in a "closed" position to the desired sampling interval using a hydraulic rig. Keeping the sampler closed minimizes the potential of cross contamination caused by sloughing. The inner tip of the sampler is then retracted 12 inches (or 18 inches if using the longer sampler) leaving a hollow soil sampler with two inner 1¼ inch diameter by 6 inch or four 3 inch long soil sample tubes. If using the 18 inch sampler, two 1½ inch diameter by 6 inch long tubes will be exposed. The hollow sampler is then pushed in a locked "open" position to collect a soil sample. The filled sampler and push rods are then retrieved to the ground surface. Because the soil enters the sampler at a constant rate, the opportunity for 100% recovery is increased. For environmental analysis, the soil sample tube ends are sealed with Teflon and plastic caps. Often, a longer "split tube" can be used for geotechnical sampling.

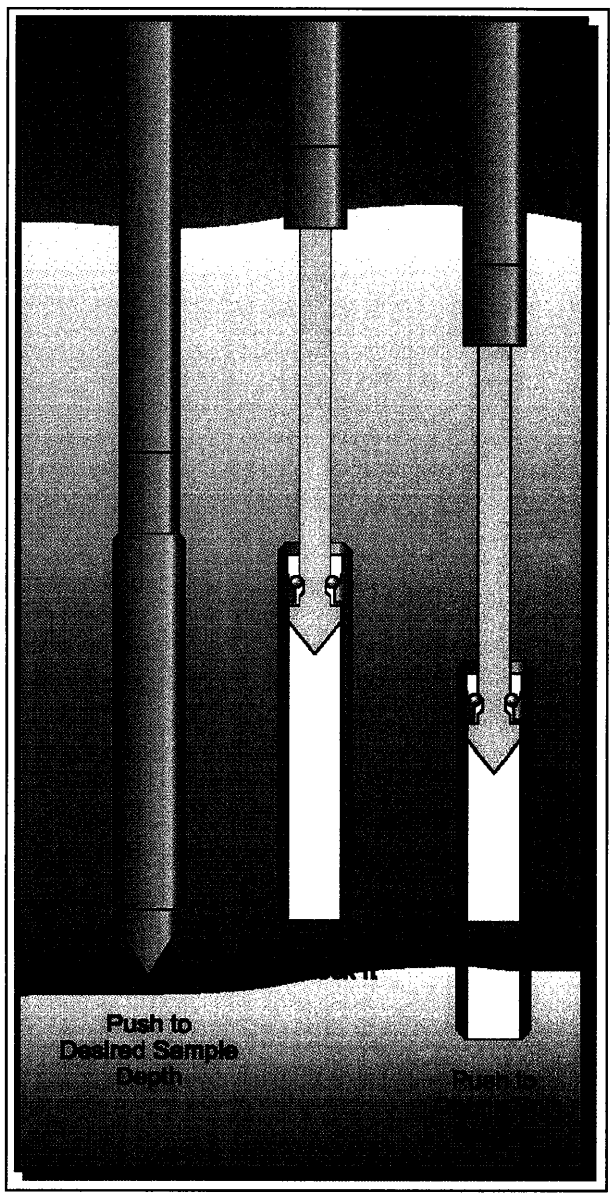


Figure SS

For a detailed reference on direct push soil sampling, refer to Robertson et al, 1998.

A summary of the soil samples collected, including the sampling date, depth and location identification, is presented in Table 1.

Bibliography

Lunne, T., Robertson, P.K. and Powell, J.J.M., "Cone Penetration Testing in Geotechnical Practice" E & FN Spon. ISBN 0 419 23750, 1997

Roberston, P.K., "Soil Classification using the Cone Penetration Test", Canadian Geotechnical Journal, Vol. 27, 1990 pp. 151-158.

Mayne, P.W., "NHI (2002) Manual on Subsurface Investigations: Geotechnical Site Characterization", available through www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/index.html, Section 5.3, pp. 107-112.

Robertson, P.K., R.G. Campanella, D. Gillespie and A. Rice, "Seismic CPT to Measure In-Situ Shear Wave Velocity", Journal of Geotechnical Engineering ASCE, Vol. 112, No. 8, 1986 pp. 791-803.

Robertson, P.K., Sully, J., Woeller, D.J., Lunne, T., Powell, J.J.M., and Gillespie, D.J., "Guidelines for Estimating Consolidation Parameters in Soils from Piezocone Tests", Canadian Geotechnical Journal, Vol. 29, No. 4, August 1992, pp. 539-550.

Robertson, P.K., T. Lunne and J.J.M. Powell, "Geo-Environmental Application of Penetration Testing", Geotechnical Site Characterization, Robertson & Mayne (editors), 1998 Balkema, Rotterdam, ISBN 90 5410 939 4 pp 35-47.

Campanella, R.G. and I. Weemees, "Development and Use of An Electrical Resistivity Cone for Groundwater Contamination Studies", Canadian Geotechnical Journal, Vol. 27 No. 5, 1990 pp. 557-567.

DeGroot, D.J. and A.J. Lutenegger, "Reliability of Soil Gas Sampling and Characterization Techniques", International Site Characterization Conference - Atlanta, 1998.

Woeller, D.J., P.K. Robertson, T.J. Boyd and Dave Thomas, "Detection of Polyaromatic Hydrocarbon Contaminants Using the UVIF-CPT", 53rd Canadian Geotechnical Conference Montreal, QC October pp. 733-739, 2000.

Zemo, D.A., T.A. Delfino, J.D. Gallinatti, V.A. Baker and L.R. Hilpert, "Field Comparison of Analytical Results from Discrete-Depth Groundwater Samplers" BAT EnviroProbe and QED HydroPunch, Sixth national Outdoor Action Conference, Las Vegas, Nevada Proceedings, 1992, pp 299-312.

Copies of ASTM Standards are available through www.astm.org

Attachment D

Vapor Probe Boring Logs

Boring/Well Log Legend

KEY TO SYMBOLS/ABBREVIATIONS

- First encountered groundwater
- Static groundwater
- Soils logged by hand-auger or air-knife cuttings
- Soils logged by drill cuttings or disturbed sample
- Undisturbed soil sample interval
- Soil sample retained for submittal to analytical laboratory
- No recovery within interval
- Hydropunch or vapor sample screen interval

PID = Photo-ionization detector or organic vapor meter reading in parts per million (ppm)

fbg = Feet below grade

Blow Counts = Number of blows required to drive a California-modified split-spoon sampler using a 140-pound hammer falling freely 30 inches, recorded per 6-inch interval of a total 18-inch sample interval

(10YR 4/4) = Soil color according to Munsell Soil Color Charts

msl = Mean sea level

Soils logged according to the USCS.

UNIFIED SOILS CLASSIFICATION SYSTEM (USCS) SUMMARY

Major Divisions			Graphic	Group Symbol	Typical Description
Coarse-Grained Soils (>50% Sands and/or Gravels)	Gravel and Gravelly Soils	Clean Gravels (≤5% fines)		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		Gravels with Fines (≥15% fines)		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
	Sand and Sandy Soils	Clean Sands (≤5% fines)		SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sand, little or no fines
		Sands with Fines (≥15% fines)		SM	Silty sands, sand-silt mixtures
				SC	Clayey sands, sand-clay mixtures
Fine-Grained Soils (>50% Silts and/or Clays)	Silts and Clays			ML	Inorganic silts, very fine sands, silty or clayey fine sands, clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
	Silts and Clays			MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils
				CH	Inorganic clays of high plasticity
				OH	Organic clays of medium to high plasticity, organic silts
Highly Organic Soils				PT	Peat, humus, swamp soils with high organic contents

M:\Templates & Forms\Boring Logs\Boring Log Legend

CONESTOGA-ROVERS & ASSOCIATES

Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, California 95476
Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	VP-7
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	06-Jun-07
LOCATION	2703 Martin Luther King Jr. Way, Oakland, CA	**DRILLING COMPLETED**	06-Jun-07
PROJECT NUMBER	0781	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	NA	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3.5"	**SCREENED INTERVAL**	NA
LOGGED BY	M. Kennerknecht	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	A. Friel, PG 6452	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Located at 670 27th Street.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		VP-7-4.5		5	ML		**SILT (ML)**; moist; 30% clay, 65% silt, 5% fine sand; medium plasticity.	5.0	Portland Type I/II 1/4" diameter tephlon tubing Bentonite Seal Monterey Sand #2/12 3" length screen Bentonite Seal Monterey Sand #2/12 3" length screen Bottom of Boring @ 5 ft
				10					

WELL LOG (PID) I:\SONOMA~1.SHE\0AFEB7~1\GINT\0781.GPJ DEFAULT.GDT 8/14/07

Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, California 95476
Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	VP-8
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	29-May-07
LOCATION	2703 Martin Luther King Jr. Way, Oakland, CA	**DRILLING COMPLETED**	29-May-07
PROJECT NUMBER	0781	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	NA	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3.5"	**SCREENED INTERVAL**	NA
LOGGED BY	M. Kennerknecht	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	A. Friel, PG 6452	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Located at 664 27th Street.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		VP-8-4.5		5	ML		**SILT (ML)**; moist; 30% clay, 65% silt, 5% fine sand; medium plasticity.	5.0	Portland Type I/II 1/4" diameter tephlon tubing Bentonite Seal Monterey Sand #2/12 3" length stainless steel screen Bentonite Seal Monterey Sand #2/12 3" length stainless steel screen Bottom of Boring @ 5 ft

10

WELL LOG (PID) I:\SONOMA~1.SHE\OAFEB7~1\GINT\0781.GPJ DEFAULT.GDT 8/14/07

Attachment E

Certified Analytical Reports

Calscience
Environmental
Laboratories, Inc.

May 30, 2007

Ana Friel
Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Subject: **Calscience Work Order No.: 07-05-1563**
Client Reference: 2703 Martin Luther King, Oakland, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/22/2007 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Don Burley
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	05/22/07
5900 Hollis Street, Suite A		Work Order No:	07-05-1563
Emeryville, CA 94608-2008		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: 2703 Martin Luther King, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
CPT-6-23-W	**07-05-1563-2**	**05/17/07**	**Aqueous**	**GC 29**	**05/22/07**	**05/23/07**	**070522B01**

Comment(s): -The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	86	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	76	38-134	

Method Blank	**099-12-436-475**	**N/A**	**Aqueous**	**GC 29**	**05/22/07**	**05/22/07**	**070522B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	75	38-134	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates	Date Received:	05/22/07
5900 Hollis Street, Suite A	Work Order No:	07-05-1563
Emeryville, CA 94608-2008	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: 2703 Martin Luther King, Oakland, CA		Page 1 of 1

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
CPT-6-23-W	**07-05-1563-2**	**05/17/07**	**Aqueous**	**GC/MS L**	**05/29/07**	**05/29/07**	**070529L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.19	1		p/m-Xylene	1.1	1.0	0.27	1	B
Ethylbenzene	0.38	1.0	0.13	1	J	o-Xylene	0.34	1.0	0.17	1	J
Toluene	2.4	1.0	0.23	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	109	74-140		1,2-Dichloroethane-d4	112	74-146	
Toluene-d8	101	88-112		1,4-Bromofluorobenzene	100	74-110	

Method Blank	**099-10-006-21,531**	**N/A**	**Aqueous**	**GC/MS L**	**05/29/07**	**05/29/07**	**070529L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.19	1		p/m-Xylene	0.33	1.0	0.27	1	J
Ethylbenzene	ND	1.0	0.13	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.23	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	107	74-140		1,2-Dichloroethane-d4	108	74-146	
Toluene-d8	100	88-112		1,4-Bromofluorobenzene	101	74-110	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 05/22/07
Work Order No: 07-05-1563
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: 2703 Martin Luther King, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
CPT-6-17	**07-05-1563-1**	**05/17/07**	**Solid**	**GC 4**	**05/23/07**	**05/23/07**	**070523B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	75	42-126	

Method Blank	**099-12-279-730**	**N/A**	**Solid**	**GC 4**	**05/23/07**	**05/23/07**	**070523B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	69	42-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates	Date Received:	05/22/07
5900 Hollis Street, Suite A	Work Order No:	07-05-1563
Emeryville, CA 94608-2008	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: 2703 Martin Luther King, Oakland, CA		Page 1 of 1

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
CPT-6-17	**07-05-1563-1**	**05/17/07**	**Solid**	**GC/MS Q**	**05/25/07**	**05/25/07**	**070525L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	0.0020	0.0050	0.0007	1	J	p/m-Xylene	0.0019	0.0050	0.0013	1	J
Ethylbenzene	ND	0.0050	0.0007	1		o-Xylene	ND	0.0050	0.0006	1	
Toluene	0.0032	0.0050	0.0005	1	J						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	114	73-139		1,2-Dichloroethane-d4	116	73-145	
Toluene-d8	104	90-108		1,4-Bromofluorobenzene	88	71-113	

Method Blank	099-10-005-14,157	N/A	Solid	GC/MS Q	05/25/07	05/25/07	070525L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0007	1		p/m-Xylene	ND	0.0050	0.0013	1	
Ethylbenzene	ND	0.0050	0.0007	1		o-Xylene	ND	0.0050	0.0006	1	
Toluene	ND	0.0050	0.0005	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	104	73-139		1,2-Dichloroethane-d4	102	73-145	
Toluene-d8	96	90-108		1,4-Bromofluorobenzene	87	71-113	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 05/22/07
Work Order No: 07-05-1563
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-05-1594-1	**Aqueous**	**GC 29**	**05/22/07**	**05/22/07**	**070522S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	108	106	68-122	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 05/22/07
Work Order No: 07-05-1563
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-05-1620-6	**Solid**	**GC 4**	**05/23/07**	**05/24/07**	**070523S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	97	94	48-114	4	0-23	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 05/22/07
Work Order No: 07-05-1563
Preparation: EPA 5030B
Method: EPA 8260B

Project 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-05-1571-1	**Aqueous**	**GC/MS L**	**05/29/07**	**05/29/07**	**070529S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	101	88-118	0	0-7	
Carbon Tetrachloride	112	110	67-145	2	0-11	
Chlorobenzene	108	108	88-118	0	0-7	
1,2-Dichlorobenzene	109	109	86-116	0	0-8	
1,1-Dichloroethene	111	110	70-130	1	0-25	
Toluene	107	108	87-123	0	0-8	
Trichloroethene	107	107	79-127	0	0-10	
Vinyl Chloride	99	100	69-129	0	0-13	
Methyl-t-Butyl Ether (MTBE)	102	107	71-131	5	0-13	
Tert-Butyl Alcohol (TBA)	96	119	36-168	21	0-45	
Diisopropyl Ether (DIPE)	108	108	81-123	0	0-9	
Ethyl-t-Butyl Ether (ETBE)	106	107	72-126	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	100	104	72-126	4	0-12	
Ethanol	96	118	53-149	17	0-31	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 05/22/07
Work Order No: 07-05-1563
Preparation: EPA 5030B
Method: EPA 8260B

Project 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CPT-6-17	**Solid**	**GC/MS Q**	**05/25/07**	**05/25/07**	**070525S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	93	86	79-115	8	0-13	
Carbon Tetrachloride	87	82	55-139	6	0-15	
Chlorobenzene	93	84	79-115	10	0-17	
1,2-Dichlorobenzene	83	78	63-123	7	0-23	
1,1-Dichloroethene	87	82	69-123	6	0-16	
Toluene	91	85	79-115	7	0-15	
Trichloroethene	91	85	66-144	7	0-14	
Vinyl Chloride	93	91	60-126	2	0-14	
Methyl-t-Butyl Ether (MTBE)	82	79	68-128	4	0-14	
Tert-Butyl Alcohol (TBA)	83	84	44-134	0	0-37	
Diisopropyl Ether (DIPE)	89	84	75-123	6	0-12	
Ethyl-t-Butyl Ether (ETBE)	85	81	75-117	4	0-12	
Tert-Amyl-Methyl Ether (TAME)	88	82	79-115	7	0-12	
Ethanol	76	75	42-138	1	0-28	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	07-05-1563
Emeryville, CA 94608-2008		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-475	**Aqueous**	**GC 29**	**05/22/07**	**05/22/07**	**070522B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	104	103	78-120	0	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	07-05-1563
Emeryville, CA 94608-2008		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-279-730	**Solid**	**GC 4**	**05/23/07**	**05/23/07**	**070523B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	98	97	70-124	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: N/A
Work Order No: 07-05-1563
Preparation: EPA 5030B
Method: EPA 8260B

Project: 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-21,531	**Aqueous**	**GC/MS L**	**05/29/07**	**05/29/07**	**070529L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	101	101	84-120	1	0-8	
Carbon Tetrachloride	108	107	63-147	1	0-10	
Chlorobenzene	104	105	89-119	1	0-7	
1,2-Dichlorobenzene	106	107	89-119	1	0-9	
1,1-Dichloroethene	107	107	77-125	0	0-16	
Toluene	103	105	83-125	1	0-9	
Trichloroethene	104	104	89-119	0	0-8	
Vinyl Chloride	98	98	63-135	0	0-13	
Methyl-t-Butyl Ether (MTBE)	104	103	82-118	0	0-13	
Tert-Butyl Alcohol (TBA)	103	107	46-154	4	0-32	
Diisopropyl Ether (DIPE)	106	104	81-123	1	0-11	
Ethyl-t-Butyl Ether (ETBE)	106	105	74-122	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	102	102	76-124	0	0-10	
Ethanol	107	110	60-138	2	0-32	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received:	N/A
Work Order No:	07-05-1563
Preparation:	EPA 5030B
Method:	EPA 8260B

Project: 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-005-14,157	**Solid**	**GC/MS Q**	**05/25/07**	**05/25/07**	**070525L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	102	84-114	0	0-7	
Carbon Tetrachloride	96	98	66-132	2	0-12	
Chlorobenzene	104	103	87-111	1	0-7	
1,2-Dichlorobenzene	100	101	79-115	1	0-8	
1,1-Dichloroethene	97	98	73-121	0	0-12	
Toluene	101	100	78-114	0	0-7	
Trichloroethene	100	102	84-114	2	0-8	
Vinyl Chloride	111	97	63-129	14	0-15	
Methyl-t-Butyl Ether (MTBE)	90	92	77-125	2	0-11	
Tert-Butyl Alcohol (TBA)	104	109	47-137	5	0-27	
Diisopropyl Ether (DIPE)	96	98	76-130	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	93	95	76-124	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	94	96	82-118	2	0-11	
Ethanol	90	92	59-131	2	0-21	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 07-05-1563

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

LAB: TA

- ☐ TA - Irvine, California
- ☐ TA - Morgan Hill, California
- ☐ TA - Sacramenta, California
- ☐ TA - Nashville, Tennesee
- ☒ Calscience
- ☒ Other_____

SHELL Chain Of Custody Record

NAME OF PERSON TO BILL: Denis Brown

- ☑ ENVIRONMENTAL SERVICES
- ☐ NETWORK DEV / FE
- ☐ BILL CONSULTANT
- ☐ COMPLIANCE
- ☐ RMT/CRMT

☐ CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

INCIDENT # (ES ONLY): 9 7 0 9 3 3 9 7

PO #:

SAP or CRMT #: 1 2 9 4 4 9

DATE: 5/17/07

PAGE: 1 of 1

SAMPLING COMPANY: Conestoga-Rovers & Associates (CRA)	LOG CODE: CETS
ADDRESS: 5900 Hollis St, Suite A, Emeryville, CA 94608	
PROJECT CONTACT (Hardcopy or PDF Report to): Ana Friel	
TELEPHONE: 707 268 3812	FAX: 707 268 8180
E-MAIL: afriel@craworld.com	

SITE ADDRESS: Street and City: 2703 Martin Luther King, Oakland	State: CA	GLOBAL ID NO.: T0600101876
EDF DELIVERABLE TO (Name, Company, Office Location): Ballard, Felicia, CRA, Sonoma	PHONE NO.: 707 933 2360	E-MAIL: sonomaedf@craworld.com
CONSULTANT PROJECT NO.: 240781		
SAMPLER NAME(S) (Print): Matthias Kennerknecht		LAB USE ONLY: 07.05.1563

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS): ☑ STD ☐ 5 DAY ☐ 3 DAY ☐ 2 DAY ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

SPECIAL INSTRUCTIONS OR NOTES:

PO: ~~waste oil tank pull~~

- ☐ EDD NOT NEEDED
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMB RATE APPLIES
- ☑ RECEIPT VERIFICATION REQUESTED

No partial lab reports, send final PDF report only.

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH g- Purgeable (8260B)	TPHd - Extractable (8015M)	BTEX (8260B)	MTBE (8260B)	TBA (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	Oil & Greese EPA 9070	Chlorinated hydorcarbons 8260	EDB & EDC 8082	Cam 17 Metals Cd, Cr, Pb, Zn, Ni	PCB, PCP, PNAs Creosote 8270	Total Desolved Solids (160.1)	Total Iron (6010B)						Test for Disposal (see attached)	
1	CPT-6-17	5/17	2:45	SO	1	X		X																	
2	CPT-6-23-W	5/17	3:15	GW	5	X		X																	

FIELD NOTES:

Container/Preservative or PID Readings or Laboratory Notes

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature) TO SECURE LOCATION	Date: 5/18/07	Time: 11AM
Relinquished by: (Signature)	Received by: (Signature)	Date: 05-21-07	Time: 1222P
Relinquished by: (Signature) TO GSO	Received by: (Signature)	Date: 05/22/07	Time: 1000

05/02/06 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 07 - 05 - 1563

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: CRA DATE: 05/22/07

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
2.7 °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Present: ✓

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.	✓		
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

KIFF Analytical LLC

Report Number : 56920
Date : 6/14/2007

Ana Friel
Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476

Subject : 2 Water Samples
Project Name : 2703 Martin Luther King Jr. Wy Oakland
Project Number : 240781
P.O. Number : 97093397

Dear Ms. Friel,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 56920
Date : 6/14/2007

Project Name : **2703 Martin Luther King Jr. Wy Oakland**
Project Number : **240781**

Sample : **CPT-10A** Matrix : Water Lab Number : 56920-01
Sample Date :6/8/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1600**	15	ug/L	EPA 8260B	6/12/2007
Toluene	**1100**	15	ug/L	EPA 8260B	6/12/2007
Ethylbenzene	**2600**	15	ug/L	EPA 8260B	6/12/2007
Total Xylenes	**7700**	15	ug/L	EPA 8260B	6/12/2007
TPH as Gasoline	**38000**	1500	ug/L	EPA 8260B	6/12/2007
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	6/12/2007
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	6/12/2007

Sample : **CPT-10B** Matrix : Water Lab Number : 56920-03
Sample Date :6/8/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**3.8**	0.50	ug/L	EPA 8260B	6/12/2007
Toluene	**4.9**	0.50	ug/L	EPA 8260B	6/12/2007
Ethylbenzene	**23**	0.50	ug/L	EPA 8260B	6/12/2007
Total Xylenes	**110**	0.50	ug/L	EPA 8260B	6/12/2007
TPH as Gasoline	**640**	50	ug/L	EPA 8260B	6/12/2007
Toluene - d8 (Surr)	98.4		% Recovery	EPA 8260B	6/12/2007
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	6/12/2007

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 56920

Date : 6/14/2007

QC Report : Method Blank Data

Project Name : **2703 Martin Luther King Jr. Wy Oakland**

Project Number : **240781**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/12/2007
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/12/2007
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/12/2007
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/12/2007
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/12/2007
Toluene - d8 (Surr)	99.6		%	EPA 8260B	6/12/2007
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	6/12/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 56920

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 6/14/2007

Project Name : **2703 Martin Luther King**

Project Number : **240781**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	56920-03	3.8	39.9	39.8	44.5	44.3	ug/L	EPA 8260B	6/12/07	102	102	0.344	70-130	25
Toluene	56920-03	4.9	39.9	39.8	46.0	45.9	ug/L	EPA 8260B	6/12/07	103	103	0.138	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 56920

QC Report : Laboratory Control Sample (LCS)

Date : 6/14/2007

Project Name : **2703 Martin Luther King**

Project Number : **240781**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	6/12/07	102	70-130
Toluene	40.0	ug/L	EPA 8260B	6/12/07	102	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

LAB:
- ☐ TA - Irvine, California
- ☐ TA - Morgan Hill, California
- ☐ TA - Sacramento, California
- ☐ TA - Nashville, Tennesee
- ☒ ~~Calscience~~
- ☒ Other Kiff

SHELL Chain Of Custody Record

56920

NAME OF PERSON TO BILL: Denis Brown

☒ ENVIRONMENTAL SERVICES ☐ NETWORK DEV / FE ☐ BILL CONSULTANT ☐ COMPLIANCE ☐ RMT/CRMT

☐ CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

INCIDENT # (ES ONLY): 97093397

PO #:

SAP or CRMT #: 129449

DATE: 6/8/07

PAGE: 1 of 1

SAMPLING COMPANY: Conestoga-Rovers & Associates	LOG CODE: CETS
SITE ADDRESS: Street and City: 2703 Martin Luther King Jr. Wy Oakland	State: CA
GLOBAL ID NO.: T0600101876	
ADDRESS: 19449 Riverside Dr. Suite 230 Sonoma, CA 95476	
EDF DELIVERABLE TO (Name, Company, Office Location): Felicia Ballard, CRA, Sonoma	PHONE NO.: 707-933-2360
E-MAIL: sonomaedf@craworld.com	CONSULTANT PROJECT NO.: 240781
PROJECT CONTACT (Hardcopy or PDF Report to):	
TELEPHONE: 707 268 3812	FAX: 707 268 8180
E-MAIL: afriel@craworld.com	SAMPLER NAME(S) (Print): Celina Hernandez

LAB USE ONLY

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS): ☒ STD ☐ 5 DAY ☐ 3 DAY ☐ 2 DAY ☐ 24 HOURS ☒ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES:
- ☐ EDD NOT NEEDED
- ☒ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMB RATE APPLIES
- ☒ RECEIPT VERIFICATION REQUESTED

Strip Midfluent Data from EDF files
Compliance Samples
cc reports to: afriel@craworld.com
~~Hour Meter~~ =
~~Flowmeter~~ =

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Purgeable (8015B)	TPH - Extractable (8015M)	BTEX (8260B) + TPHg	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)								Lead X Total ☐	LUFT5 ☐ Total ☐ STLC ☐ TCLP	CAM17 ☐ Total ☐ STLC ☐ TCLP	Test for Disposal (see attached)	Flashpoint (1010A)	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes	
																										TEMPERATURE ON RECEIPT C°	
•	CPT 10A	6/8/07	various	AQ	3			X																		VOAs w/ HCL	01
•	CPT-10B-15.5	6/8/07	1124	Soil ~~AQ~~	1																					Hold	02
•	CPT-10B	6/8/07	1135	AQ	4			X																			03
				AQ																						CPT-10A c.H.	
				AQ																						@ ~~20~~ fbg	
				AQ																						17	
				AQ																							
				AQ																							
				AQ																							
				AQ																							

SAMPLE RECEIPT
Temp °C 4.0 Therm. ID# IR-5
Initial RM Date 061107
Time 1450 Coolant present

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Celina [signature]	Secured Location	6/8/07	1405
[signature]			
	Roz McLee Kiff Analytical	061107	1108

05/02/06 Revision
Q&Q Graphic (714) 898-9702
Cambria Revision 10/11/06

C:\Documents and Settings\bwong\Desktop\1730 135 North Access OM Docs.xls\Monthly GWE COC

Calscience
Environmental
Laboratories, Inc.

June 11, 2007

Ana Friel
Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Subject: **Calscience Work Order No.: 07-06-0106**
Client Reference: 2703 Martin Luther King, Oakland, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/2/2007 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Don Burley
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/02/07
Work Order No: 07-06-0106
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: 2703 Martin Luther King, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-8-4.5	**07-06-0106-1**	**05/29/07**	**Solid**	**GC 30**	**06/02/07**	**06/02/07**	**070602B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	87	42-126	

Method Blank	**099-12-279-760**	**N/A**	**Solid**	**GC 30**	**06/02/07**	**06/02/07**	**070602B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	88	42-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	06/02/07
5900 Hollis Street, Suite A		Work Order No:	07-06-0106
Emeryville, CA 94608-2008		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	mg/kg
Project: 2703 Martin Luther King, Oakland, CA			Page 1 of 1

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-8-4.5	**07-06-0106-1**	**05/29/07**	**Solid**	**GC/MS JJ**	**06/04/07**	**06/04/07**	**070604L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	0.00096	0.0050	0.0007	1	J	p/m-Xylene	0.0015	0.0050	0.0013	1	J
Ethylbenzene	0.00084	0.0050	0.0007	1	J	o-Xylene	ND	0.0050	0.0006	1	
Toluene	0.00084	0.0050	0.0005	1	J						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	114	73-139		1,2-Dichloroethane-d4	118	73-145	
Toluene-d8	96	90-108		1,4-Bromofluorobenzene	85	71-113	

Method Blank	**099-10-005-14,188**	**N/A**	**Solid**	**GC/MS JJ**	**06/04/07**	**06/04/07**	**070604L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.0050	0.0007	1		p/m-Xylene	ND	0.0050	0.0013	1	
Ethylbenzene	ND	0.0050	0.0007	1		o-Xylene	ND	0.0050	0.0006	1	
Toluene	ND	0.0050	0.0005	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	110	73-139		1,2-Dichloroethane-d4	116	73-145	
Toluene-d8	95	90-108		1,4-Bromofluorobenzene	84	71-113	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/02/07
Work Order No: 07-06-0106
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-06-0084-5	**Solid**	**GC 30**	**06/02/07**	**06/02/07**	**070602S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	73	81	48-114	10	0-23	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/02/07
Work Order No: 07-06-0106
Preparation: EPA 5030B
Method: EPA 8260B

Project 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-06-0082-1	**Solid**	**GC/MS JJ**	**06/04/07**	**06/04/07**	**070604S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	98	79-115	0	0-13	
Carbon Tetrachloride	106	106	55-139	0	0-15	
Chlorobenzene	97	96	79-115	1	0-17	
1,2-Dichlorobenzene	89	91	63-123	2	0-23	
1,1-Dichloroethene	96	95	69-123	1	0-16	
Toluene	102	102	79-115	0	0-15	
Trichloroethene	101	102	66-144	1	0-14	
Vinyl Chloride	86	86	60-126	1	0-14	
Methyl-t-Butyl Ether (MTBE)	91	92	68-128	2	0-14	
Tert-Butyl Alcohol (TBA)	58	60	44-134	4	0-37	
Diisopropyl Ether (DIPE)	95	95	75-123	0	0-12	
Ethyl-t-Butyl Ether (ETBE)	87	88	75-117	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	85	87	79-115	3	0-12	
Ethanol	73	81	42-138	11	0-28	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Conestoga-Rovers & Associates	Date Received:	N/A
5900 Hollis Street, Suite A	Work Order No:	07-06-0106
Emeryville, CA 94608-2008	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-279-760	**Solid**	**GC 30**	**06/02/07**	**06/02/07**	**070602B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	88	91	70-124	3	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: N/A
Work Order No: 07-06-0106
Preparation: EPA 5030B
Method: EPA 8260B

Project: 2703 Martin Luther King, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-005-14,188	**Solid**	**GC/MS JJ**	**06/04/07**	**06/04/07**	**070604L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	102	84-114	0	0-7	
Carbon Tetrachloride	110	111	66-132	1	0-12	
Chlorobenzene	99	101	87-111	2	0-7	
1,2-Dichlorobenzene	98	97	79-115	0	0-8	
1,1-Dichloroethene	99	98	73-121	1	0-12	
Toluene	106	106	78-114	0	0-7	
Trichloroethene	105	104	84-114	0	0-8	
Vinyl Chloride	88	89	63-129	1	0-15	
Methyl-t-Butyl Ether (MTBE)	100	99	77-125	0	0-11	
Tert-Butyl Alcohol (TBA)	75	76	47-137	1	0-27	
Diisopropyl Ether (DIPE)	100	99	76-130	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	95	95	76-124	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	94	94	82-118	0	0-11	
Ethanol	87	84	59-131	4	0-21	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 07-06-0106

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

LAB: TA

- ☐ TA - Irvine, California
- ☐ TA - Morgan Hill, California
- ☐ TA - Sacramenta, California
- ☐ TA - Nashville, Tennesee
- ☑ Calscience
- ☐ Other________

SHELL Chain Of Custody Record

0106

NAME OF PERSON TO BILL: Denis Brown

- ☑ ENVIRONMENTAL SERVICES
- ☐ NETWORK DEV / FE
- ☐ BILL CONSULTANT
- ☐ COMPLIANCE
- ☐ RMT/CRMT

☐ CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

INCIDENT # (ES ONLY): 9 7 0 9 3 3 9 7

PO #:

SAP or CRMT #: 1 2 9 4 4 9

DATE: 5/29/07

PAGE: 1 of 1

SAMPLING COMPANY: Conestoga-Rovers & Associates (CRA)	LOG CODE: CETS
ADDRESS: 5900 Hollis St, Suite A, Emeryville, CA 94608	
PROJECT CONTACT (Hardcopy or PDF Report to): Ana Friel	
TELEPHONE: 707 268 3812	FAX: 707 268 8180
E-MAIL: afriel@craworld.com	
SITE ADDRESS: Street and City: 2703 MLK, Oakland	State: CA
GLOBAL ID NO.: T0600101876	
EDF DELIVERABLE TO (Name, Company, Office Location): Ballard, Felicia, CRA, Sonoma	PHONE NO.: 707 933 2360
E-MAIL: sonomaedf@craworld.com	CONSULTANT PROJECT NO.: 240781-010
SAMPLER NAME(S) (Print): Matthias Kennerknecht	LAB USE ONLY: 07-06-0106

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS): ☑ STD ☐ 5 DAY ☐ 3 DAY ☐ 2 DAY ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ________

SPECIAL INSTRUCTIONS OR NOTES:

- ☐ EDD NOT NEEDED
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMB RATE APPLIES
- ☑ RECEIPT VERIFICATION REQUESTED

No partial lab reports, send final PDF report only.

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH g- Purgeable (8260B)	TPHd - Extractable (8015M)	BTEX (8260B)	MTBE (8260B)	TBA (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	Oil & Greese EPA 9070	Chlorinated hydorcarbons 8260	EDB & EDC 8082	1,2-dichloroethane (8260B)	Ethylene dibromide (8260B)			Cam 17 Metals Cd, Cr, Pb, Zn, Ni	PCB, PCP, PNAs Creosote 8270	Total Desolved Solids (160.1)	Total Iron (6010B)	Test for Disposal (see attached)		FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	VP-8-4.5	5/29/07	1:00	SO	1	X		X																	

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	TO SECURE LOCATION	5/29/07	4:10
[signature]	[signature]	6-1-07	933Am
[signature] TO GSO	[signature] (CEL)	6/2/07	08:30

05/02/06 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 07 - 06 - 0106

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: CRA DATE: 6/02/07

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
3.5 °C IR thermometer.
_____ Ambient temperature.

Initial: RM

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Present: ✓

Initial: RM

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)			✓
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: RM

COMMENTS:

Calscience
Environmental
Laboratories, Inc.

June 15, 2007

Ana Friel
Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Subject: **Calscience Work Order No.: 07-06-0603**
Client Reference: 2703 MLK, Oakland, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/8/2007 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Don Burley
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/08/07
Work Order No: 07-06-0603
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: 2703 MLK, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-7-4.5	**07-06-0603-1**	**06/06/07**	**Solid**	**GC 25**	**06/08/07**	**06/08/07**	**070608B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	79	42-126	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-12-279-780**	**N/A**	**Solid**	**GC 25**	**06/08/07**	**06/08/07**	**070608B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene - FID	72	42-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	06/08/07
5900 Hollis Street, Suite A		Work Order No:	07-06-0603
Emeryville, CA 94608-2008		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	mg/kg

Project: 2703 MLK, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-7-4.5	**07-06-0603-1**	**06/06/07**	**Solid**	**GC/MS Q**	**06/11/07**	**06/12/07**	**070611L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		p/m-Xylene	ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		o-Xylene	ND	0.0050	1	
Toluene	ND	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	124	73-139		1,2-Dichloroethane-d4	133	73-145	
Toluene-d8	101	90-108		1,4-Bromofluorobenzene	89	71-113	

Method Blank	**099-10-005-14,224**	**N/A**	**Solid**	**GC/MS Q**	**06/11/07**	**06/12/07**	**070611L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		p/m-Xylene	ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		o-Xylene	ND	0.0050	1	
Toluene	ND	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	120	73-139		1,2-Dichloroethane-d4	126	73-145	
Toluene-d8	100	90-108		1,4-Bromofluorobenzene	88	71-113	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/08/07
Work Order No: 07-06-0603
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-06-0562-3	**Solid**	**GC 25**	**06/08/07**	**06/08/07**	**070608S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	99	82	48-114	19	0-23	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/08/07
Work Order No: 07-06-0603
Preparation: EPA 5030B
Method: EPA 8260B

Project 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-06-0550-1	**Solid**	**GC/MS Q**	**06/11/07**	**06/11/07**	**070611S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	96	79-115	6	0-13	
Carbon Tetrachloride	114	106	55-139	8	0-15	
Chlorobenzene	102	96	79-115	6	0-17	
1,2-Dichlorobenzene	95	85	63-123	11	0-23	
1,1-Dichloroethene	99	94	69-123	5	0-16	
Toluene	100	93	79-115	7	0-15	
Trichloroethene	101	96	66-144	5	0-14	
Vinyl Chloride	100	97	60-126	4	0-14	
Methyl-t-Butyl Ether (MTBE)	99	94	68-128	5	0-14	
Tert-Butyl Alcohol (TBA)	110	102	44-134	7	0-37	
Diisopropyl Ether (DIPE)	106	98	75-123	7	0-12	
Ethyl-t-Butyl Ether (ETBE)	104	97	75-117	7	0-12	
Tert-Amyl-Methyl Ether (TAME)	104	96	79-115	8	0-12	
Ethanol	93	82	42-138	12	0-28	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates	Date Received:	N/A
5900 Hollis Street, Suite A	Work Order No:	07-06-0603
Emeryville, CA 94608-2008	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-279-780	**Solid**	**GC 25**	**06/08/07**	**06/08/07**	**070608B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	103	99	70-124	4	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: N/A
Work Order No: 07-06-0603
Preparation: EPA 5030B
Method: EPA 8260B

Project: 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-005-14,224	**Solid**	**GC/MS Q**	**06/11/07**	**06/12/07**	**070611L03**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	102	84-114	1	0-7	
Carbon Tetrachloride	114	113	66-132	1	0-12	
Chlorobenzene	103	105	87-111	2	0-7	
1,2-Dichlorobenzene	98	99	79-115	2	0-8	
1,1-Dichloroethene	99	101	73-121	2	0-12	
Toluene	101	101	78-114	0	0-7	
Trichloroethene	101	102	84-114	0	0-8	
Vinyl Chloride	113	112	63-129	2	0-15	
Methyl-t-Butyl Ether (MTBE)	96	92	77-125	4	0-11	
Tert-Butyl Alcohol (TBA)	107	114	47-137	7	0-27	
Diisopropyl Ether (DIPE)	105	106	76-130	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	101	104	76-124	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	102	103	82-118	2	0-11	
Ethanol	87	97	59-131	11	0-21	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 07-06-0603

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

SHELL Chain Of Custody Record

LAB: TA

- ☐ TA - Irvine, California
- ☐ TA - Morgan Hill, California
- ☐ TA - Sacramento, California
- ☐ TA - Nashville, Tennesee
- ☑ Calscience
- ☐ Other_____

NAME OF PERSON TO BILL: Denis Brown

- ☑ ENVIRONMENTAL SERVICES
- ☐ NETWORK DEV / FE
- ☐ BILL CONSULTANT
- ☐ COMPLIANCE
- ☐ RMT/CRMT

☐ CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

INCIDENT # (ES ONLY): 9 7 0 9 3 3 9 7

PO #:

SAP or CRMT #: 1 2 9 4 4 9

DATE: 6/6/07

PAGE: 1 of 1

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS: Street and City	State	GLOBAL ID NO.:
Conestoga-Rovers & Associates (CRA)	CETS	2703 MLK, Oakland	CA	T0600101876

ADDRESS:	EDF DELIVERABLE TO (Name, Company, Office Location):	PHONE NO.:	E-MAIL:	CONSULTANT PROJECT NO.:
5900 Hollis St, Suite A, Emeryville, CA 94608	Ballard, Felicia, CRA, Sonoma	707 933 2360	sonomaedf@craworld.com	240781-010

PROJECT CONTACT (Hardcopy or PDF Report to):	TELEPHONE:	FAX:	E-MAIL:
Ana Friel	707 268 3812	707 268 8180	afriel@craworld.com

SAMPLER NAME(S) (Print): Matthias Kennerknecht

LAB USE ONLY: 06- 0603

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS): ☑ STD ☐ 5 DAY ☐ 3 DAY ☐ 2 DAY ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

SPECIAL INSTRUCTIONS OR NOTES:

- ☐ EDD NOT NEEDED
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMB RATE APPLIES
- ☑ RECEIPT VERIFICATION REQUESTED

No partial lab reports, send final PDF report only.

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH g- Purgeable (TO-15)	TPHd - Extractable (8015M)	BTEX (TO-15)	MTBE (8260B)	TBA (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	Oil & Greese EPA 9070	Chlorinated hydorcarbons 8260	EDB & EDC 8082	1,2-dichloroethane (8260B)	Ethylene dibromide (8260B)				Cam 17 Metals Cd, Cr, Pb, Zn, Ni	PCB, PCP, PNAs Creosote 8270	Total Desolved Solids (160.1)	Total Iron (6010B)	Test for Disposal (see attached)		TEMPERATURE ON RECEIPT C°
	VP-7-4.5	6/6	10:02	SO	1	X		X																		

FIELD NOTES:
Container/Preservative or PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	SECURE LOCATION	6/6/07	1:45 PM
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	Manuela Rivera	6/7/07	8:55
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
to GSO		6/8/07	0900

05/02/06 Revision

Page 8 of 10

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 07 - 06 - 0603

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: CRA DATE: 6/8/07

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
4.1 °C IR thermometer.
_____ Ambient temperature.

Initial: JP

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Present: ✓

Initial: JP

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)			✓
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: JP

COMMENTS:

Calscience
Environmental
Laboratories, Inc.

Supplemental Report 1

June 05, 2007

The original report has been revised/corrected.

Ana Friel
Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Subject: **Calscience Work Order No.: 07-06-0105**
Client Reference: 2703 MLK, Oakland, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/2/2007 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Don Burley
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/02/07
Work Order No: 07-06-0105
Preparation: N/A
Method: EPA TO-3 (M)

Project: 2703 MLK, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-3-5	**07-06-0105-1**	**05/30/07**	**Air**	**GC 13**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	31000000	440000	31.8		ug/m3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-1-3	**07-06-0105-2**	**05/30/07**	**Air**	**GC 13**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	5500000	22000	1.59		ug/m3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-6-3	**07-06-0105-3**	**05/30/07**	**Air**	**GC 13**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	3500000	22000	1.59		ug/m3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-6-5	**07-06-0105-4**	**05/30/07**	**Air**	**GC 13**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1900000	22000	1.59		ug/m3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
AMBIENT	**07-06-0105-5**	**05/30/07**	**Air**	**GC 13**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	19000	1.41		ug/m3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-4-3	**07-06-0105-6**	**05/30/07**	**Air**	**GC 13**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	800000	21000	1.54		ug/m3

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/02/07
Work Order No: 07-06-0105
Preparation: N/A
Method: EPA TO-3 (M)

Project: 2703 MLK, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-4-5	**07-06-0105-7**	**05/30/07**	**Air**	**GC 13**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	680000	23000	1.65		ug/m3

Method Blank	**098-01-005-886**	**N/A**	**Air**	**GC 13**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	14000	1		ug/m3

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	06/02/07
5900 Hollis Street, Suite A		Work Order No:	07-06-0105
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: 2703 MLK, Oakland, CA			Page 1 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-3-5	**07-06-0105-1**	**05/30/07**	**Air**	**GC/MS V**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	760	64	39.8		p/m-Xylene	ND	170	39.8	
Toluene	ND	75	39.8		o-Xylene	ND	86	39.8	
Ethylbenzene	ND	86	39.8						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	87	57-129		1,2-Dichloroethane-d4	97	47-137	
Toluene-d8	29	78-156	2				

VP-1-3	**07-06-0105-2**	**05/30/07**	**Air**	**GC/MS DD**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	510	318		p/m-Xylene	ND	1400	318	
Toluene	690	600	318		o-Xylene	ND	690	318	
Ethylbenzene	ND	690	318						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	93	57-129		1,2-Dichloroethane-d4	97	47-137	
Toluene-d8	106	78-156					

VP-6-3	**07-06-0105-3**	**05/30/07**	**Air**	**GC/MS DD**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	110	41	25.4		p/m-Xylene	160	110	25.4	
Toluene	320	48	25.4		o-Xylene	ND	55	25.4	
Ethylbenzene	ND	55	25.4						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	95	57-129		1,2-Dichloroethane-d4	97	47-137	
Toluene-d8	54	78-156	2				

VP-6-5	**07-06-0105-4**	**05/30/07**	**Air**	**GC/MS DD**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	100	63.6		p/m-Xylene	ND	280	63.6	
Toluene	410	120	63.6		o-Xylene	ND	140	63.6	
Ethylbenzene	ND	140	63.6						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	90	57-129		1,2-Dichloroethane-d4	72	47-137	
Toluene-d8	81	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	06/02/07
5900 Hollis Street, Suite A		Work Order No:	07-06-0105
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: 2703 MLK, Oakland, CA			Page 2 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
AMBIENT	**07-06-0105-5**	**05/30/07**	**Air**	**GC/MS DD**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	16	2.3	1.41		p/m-Xylene	ND	6.1	1.41	
Toluene	16	2.7	1.41		o-Xylene	ND	3.1	1.41	
Ethylbenzene	ND	3.1	1.41						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	92	57-129		1,2-Dichloroethane-d4	94	47-137	
Toluene-d8	97	78-156					

VP-4-3	**07-06-0105-6**	**05/30/07**	**Air**	**GC/MS DD**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	79	49.3		p/m-Xylene	ND	210	49.3	
Toluene	240	93	49.3		o-Xylene	ND	110	49.3	
Ethylbenzene	ND	110	49.3						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	85	57-129		1,2-Dichloroethane-d4	96	47-137	
Toluene-d8	97	78-156					

VP-4-5	**07-06-0105-7**	**05/30/07**	**Air**	**GC/MS DD**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	66	41.3		p/m-Xylene	ND	180	41.3	
Toluene	170	78	41.3		o-Xylene	ND	90	41.3	
Ethylbenzene	ND	90	41.3						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	90	57-129		1,2-Dichloroethane-d4	72	47-137	
Toluene-d8	101	78-156					

Method Blank	**097-09-002-5,938**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.6	1		p/m-Xylene	ND	4.3	1	
Toluene	ND	1.9	1		o-Xylene	ND	2.2	1	
Ethylbenzene	ND	2.2	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	96	57-129		1,2-Dichloroethane-d4	94	47-137	
Toluene-d8	96	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates	Date Received:	06/02/07
5900 Hollis Street, Suite A	Work Order No:	07-06-0105
Emeryville, CA 94608-2008	Preparation:	N/A
	Method:	EPA TO-15
	Units:	ug/m3

Project: 2703 MLK, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**097-09-002-5,939**	**N/A**	**Air**	**GC/MS V**	**N/A**	**06/02/07**	**070602L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.6	1		p/m-Xylene	ND	4.3	1	
Toluene	ND	1.9	1		o-Xylene	ND	2.2	1	
Ethylbenzene	ND	2.2	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	84	57-129		1,2-Dichloroethane-d4	94	47-137	
Toluene-d8	96	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Conestoga-Rovers & Associates	Date Received:	06/02/07
5900 Hollis Street, Suite A	Work Order No:	07-06-0105
Emeryville, CA 94608-2008	Preparation:	N/A
	Method:	EPA TO-3 (M)

Project: 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
VP-4-3	**Air**	**GC 13**	**N/A**	**06/02/07**	**070602D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
TPH as Gasoline	800000	790000	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: N/A
Work Order No: 07-06-0105
Preparation: N/A
Method: EPA TO-15

Project: 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-5,939	**Air**	**GC/MS V**	**N/A**	**06/02/07**	**070602L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	130	118	60-156	10	0-40	
Toluene	123	112	56-146	9	0-43	
Ethylbenzene	124	114	52-154	8	0-38	
p/m-Xylene	111	102	42-156	9	0-41	
o-Xylene	127	117	52-148	9	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: N/A
Work Order No: 07-06-0105
Preparation: N/A
Method: EPA TO-15

Project: 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-5,938	**Air**	**GC/MS DD**	**N/A**	**06/02/07**	**070602L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	87	60-156	11	0-40	
Toluene	104	94	56-146	10	0-43	
Ethylbenzene	111	99	52-154	11	0-38	
p/m-Xylene	94	84	42-156	11	0-41	
o-Xylene	107	95	52-148	11	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 07-06-0105

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

LAB: TA

- ☐ TA - Irvine, California
- ☐ TA - Morgan Hill, California
- ☐ TA - Sacramento, California
- ☐ TA - Nashville, Tennesee
- ☑ Calscience
- ☐ Other_____

SHELL Chain Of Custody Record

0105

NAME OF PERSON TO BILL: Denis Brown

☑ ENVIRONMENTAL SERVICES ☐ NETWORK DEV / FE ☐ BILL CONSULTANT ☐ COMPLIANCE ☐ RMT/CRMT

☐ CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

INCIDENT # (ES ONLY): 9 7 0 9 3 3 9 7

PO #:

SAP or CRMT #: 1 2 9 4 4 9

5130107

PAGE: 1 of 1

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS: Street and City	State	GLOBAL ID NO.:
Conestoga-Rovers & Associates (CRA)	CETS	2703 MLK, Oakland	CA	T0600101876

ADDRESS: 5900 Hollis St, Suite A, Emeryville, CA 94608

EDF DELIVERABLE TO (Name, Company, Office Location):	PHONE NO.:	E-MAIL:	CONSULTANT PROJECT NO.:
Ballard, Felicia, CRA, Sonoma	707 933 2360	sonomaedf@craworld.com	240781-01

PROJECT CONTACT (Hardcopy or PDF Report to): Ana Friel

TELEPHONE:	FAX:	E-MAIL:
707 268 3812	707 268 8180	afriel@craworld.com

SAMPLER NAME(S) (Print): Matthias Kennerknecht

LAB USE ONLY: 07-06-0105

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS): ☑ STD ☐ 5 DAY ☐ 3 DAY ☐ 2 DAY ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

SPECIAL INSTRUCTIONS OR NOTES:

☐ EDD NOT NEEDED
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMB RATE APPLIES
☑ RECEIPT VERIFICATION REQUESTED

No partial lab reports, send final PDF report only.

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH g- Purgeable (TO-15)	TPHd - Extractable (8015M)	BTEX (TO-15)	MTBE (8260B)	TBA (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	Oil & Greese EPA 9070	Chlorinated hydorcarbons 8260	EDB & EDC 8082	1,2-dichloroethane (8260B)	Ethylene dibromide (8260B)				Cam 17 Metals Cd, Cr, Pb, Zn, Ni	PCB, PCP, PNAs Creosote 8270	Total Desolved Solids (160.1)	Total Iron (6010B)	Test for Disposal (see attached)		TEMPERATURE ON RECEIPT C°
	VP-3-5	5/30	12:45	VP	1	X		X																	LC173
	VP-1-3	5/30	1:15	VP	1	X		X																	LC222
	VP-6-3	5/30	1:40	VP	1	X		X																	LC223
	VP-6-5	5/30	1:55	VP	1	X		X																	LC021
	AMBIENT	5/30	2:15	VP	1	X		X																	LC117
	VP-4-3	5/30	3:15	VP	1	X		X																	LC190
	VP-4-5	5/30	3:45	VP	1	X		X																	LC161

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	SECURE LOCATION	5/31/07	10:30 AM
		6-1-07	933 Am
TO GSO	(CEL)	6/2/07	0830

05/02/06 Revision

Q&D Graphic (714) 998-9702

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 07 - 06 - 0165

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: CRA DATE: 6/02/07

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
_____ °C IR thermometer.
✓ Ambient temperature.

Initial: RM

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Present: ✓

Initial: RM

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)			✓
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Summas

Initial: PM

COMMENTS:

Calscience
Environmental
Laboratories, Inc.

June 20, 2007

Ana Friel
Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Subject: **Calscience Work Order No.: 07-06-0896**
Client Reference: 2703 MLK, Oakland, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/13/2007 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Don Burley
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/13/07
Work Order No: 07-06-0896
Preparation: N/A
Method: EPA TO-3 (M)

Project: 2703 MLK, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-8-5	**07-06-0896-1**	**06/12/07**	**Air**	**GC 13**	**N/A**	**06/14/07**	**070614L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	22000	1.57		ug/m3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-8-3	**07-06-0896-2**	**06/12/07**	**Air**	**GC 13**	**N/A**	**06/14/07**	**070614L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	23000	1.65		ug/m3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-7-3	**07-06-0896-3**	**06/12/07**	**Air**	**GC 13**	**N/A**	**06/14/07**	**070614L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	21000	1.51		ug/m3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-7-5	**07-06-0896-4**	**06/12/07**	**Air**	**GC 13**	**N/A**	**06/14/07**	**070614L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	21000	1.53		ug/m3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**098-01-005-897**	**N/A**	**Air**	**GC 13**	**N/A**	**06/14/07**	**070614L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	14000	1		ug/m3

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 06/13/07
Work Order No: 07-06-0896
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 2703 MLK, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
VP-8-5	**07-06-0896-1**	**06/12/07**	**Air**	**GC/MS V**	**N/A**	**06/15/07**	**070615L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	33	2.5	1.57		p/m-Xylene	210	6.8	1.57	
Toluene	11000	120	62.8		o-Xylene	68	3.4	1.57	
Ethylbenzene	120	3.4	1.57						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	92	57-129		1,2-Dichloroethane-d4	88	47-137	
Toluene-d8	89	78-156					

VP-8-3	**07-06-0896-2**	**06/12/07**	**Air**	**GC/MS V**	**N/A**	**06/15/07**	**070615L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	20	2.6	1.65		p/m-Xylene	200	7.2	1.65	
Toluene	9300	120	66		o-Xylene	67	3.6	1.65	
Ethylbenzene	120	3.6	1.65						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	101	57-129		1,2-Dichloroethane-d4	101	47-137	
Toluene-d8	96	78-156					

VP-7-3	**07-06-0896-3**	**06/12/07**	**Air**	**GC/MS V**	**N/A**	**06/15/07**	**070615L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	23	2.4	1.51		p/m-Xylene	180	6.6	1.51	
Toluene	7000	110	60.4		o-Xylene	61	3.3	1.51	
Ethylbenzene	110	3.3	1.51						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	98	57-129		1,2-Dichloroethane-d4	101	47-137	
Toluene-d8	97	78-156					

VP-7-5	**07-06-0896-4**	**06/12/07**	**Air**	**GC/MS V**	**N/A**	**06/15/07**	**070615L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	23	2.4	1.53		p/m-Xylene	170	6.6	1.53	
Toluene	2100	120	61.2		o-Xylene	60	3.3	1.53	
Ethylbenzene	110	3.3	1.53						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	97	57-129		1,2-Dichloroethane-d4	99	47-137	
Toluene-d8	98	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates	Date Received:	06/13/07
5900 Hollis Street, Suite A	Work Order No:	07-06-0896
Emeryville, CA 94608-2008	Preparation:	N/A
	Method:	EPA TO-15
	Units:	ug/m3

Project: 2703 MLK, Oakland, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**097-09-002-5,998**	**N/A**	**Air**	**GC/MS V**	**N/A**	**06/15/07**	**070615L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.6	1		p/m-Xylene	ND	4.3	1	
Toluene	ND	1.9	1		o-Xylene	ND	2.2	1	
Ethylbenzene	ND	2.2	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	96	57-129		1,2-Dichloroethane-d4	97	47-137	
Toluene-d8	95	78-156					

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**097-09-002-6,005**	**N/A**	**Air**	**GC/MS V**	**N/A**	**06/19/07**	**070619L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.6	1		p/m-Xylene	ND	4.3	1	
Toluene	ND	1.9	1		o-Xylene	ND	2.2	1	
Ethylbenzene	ND	2.2	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	97	57-129		1,2-Dichloroethane-d4	94	47-137	
Toluene-d8	93	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Conestoga-Rovers & Associates	Date Received:	06/13/07
5900 Hollis Street, Suite A	Work Order No:	07-06-0896
Emeryville, CA 94608-2008	Preparation:	N/A
	Method:	EPA TO-3 (M)

Project: 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
07-06-0930-1	**Air**	**GC 13**	**N/A**	**06/14/07**	**070614D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
TPH as Gasoline	280000	310000	9	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	07-06-0896
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-15

Project: 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-5,998	**Air**	**GC/MS V**	**N/A**	**06/15/07**	**070615L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	88	124	60-156	34	0-40	
Toluene	94	126	56-146	29	0-43	
Ethylbenzene	92	122	52-154	28	0-38	
p/m-Xylene	85	113	42-156	28	0-41	
o-Xylene	96	127	52-148	28	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: N/A
Work Order No: 07-06-0896
Preparation: N/A
Method: EPA TO-15

Project: 2703 MLK, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-6,005	**Air**	**GC/MS V**	**N/A**	**06/19/07**	**070619L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	127	126	60-156	1	0-40	
Toluene	126	127	56-146	1	0-43	
Ethylbenzene	125	126	52-154	1	0-38	
p/m-Xylene	115	117	42-156	2	0-41	
o-Xylene	127	131	52-148	3	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 07-06-0896

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

SHELL Chain Of Custody Record

LAB: TA

- ☐ TA - Irvine, California
- ☐ TA - Morgan Hill, California
- ☐ TA - Sacramento, California
- ☐ TA - Nashville, Tennesee
- ☑ Calscience
- ☐ Other______________

NAME OF PERSON TO BILL: Denis Brown

- ☑ ENVIRONMENTAL SERVICES
- ☐ NETWORK DEV / FE
- ☐ BILL CONSULTANT
- ☐ COMPLIANCE
- ☐ RMT/CRMT

☐ CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

INCIDENT # (ES ONLY): 9 7 0 9 3 3 9 7

PO #:

SAP or CRMT #: 1 2 9 4 4 9

Date: 6/12/07

PAGE: 1 of 1

SAMPLING COMPANY: Conestoga-Rovers & Associates (CRA)	LOG CODE: CETS	SITE ADDRESS: Street and City: 2703 MLK, Oakland	State: CA
GLOBAL ID NO.: T0600101876			
ADDRESS: 5900 Hollis St, Suite A, Emeryville, CA 94608	EDF DELIVERABLE TO (Name, Company, Office Location): Ballard, Felicia, CRA, Sonoma	PHONE NO.: 707 933 2360	E-MAIL: sonomaedf@craworld.com
CONSULTANT PROJECT NO.: 240781-010			
PROJECT CONTACT (Hardcopy or PDF Report to): Ana Friel	SAMPLER NAME(S) (Print): Matthias Kennerknecht	LAB USE ONLY: 06-0896	
TELEPHONE: 707 268 3812	FAX: 707 268 8180	E-MAIL: afriel@craworld.com	

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS): ~~☑ STD~~ ☐ 5 DAY ☑ 3 DAY ☐ 2 DAY ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ______________

SPECIAL INSTRUCTIONS OR NOTES:

3DAY TAT AS PER MATTHIAS, 6-12-07, 1155.

- ☐ EDD NOT NEEDED
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMB RATE APPLIES
- ☑ RECEIPT VERIFICATION REQUESTED

Please report all units in micrograms per cubic meter

No partial lab reports, send final PDF report only.

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH g- Purgeable (TO-15)	TPHd - Extractable (8015M)	BTEX (TO-15)	MTBE (8260B)	TBA (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	Oil & Greese EPA 9070	Chlorinated hydrocarbons 8260	EDB & EDC 8082	1,2-dichloroethane (8260B)	Ethylene dibromide (8260B)				Cam 17 Metals Cd, Cr, Pb, Zn, Ni	PCB, PCP, PNAs Creosote 8270	Total Desolved Solids (160.1)	Total Iron (6010B)	Test for Disposal (see attached)		FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes / TEMPERATURE ON RECEIPT C°
✓	VP-8-5	6/12	8:03	VAP	1	X		X																		LC075
✓	VP-8-3	6/12	8:15	VAP	1	X		X																		LC016
✓	VP-7-3	6/12	8:50	VAP	1	X		X																		LC265
✓	VP-7-5	6/12	9:14	VAP	1	X		X																		LC064

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	TO SECURE LOCATION	6/12/07	10:30 AM
[signature] Aviña	Manuela R	6/12/07	10:55 AM
[signature] TO GSD	[signature]	6/13/07	9:30

05/02/06 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 07 - 06 - 0896

Cooler 0 of 0

SAMPLE RECEIPT FORM

CLIENT: CRA **DATE:** 6/13/07

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
_____ °C IR thermometer.
✓ Ambient temperature.

Initial: HT

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Present: ✓

Initial: HT

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)			✓
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: HT

COMMENTS:

Summa Can

Attachment F

Disposal Documentation

MANLEY & SONS TRUCKING, INC.
SACRAMENTO, CA
DEMO
LOW BED / LOADERS
HAZARDOUS WASTE HAULING
AGGREGATES
SAND / GRAVEL
FILL DIRT
CA 0009430
(916) 381-6864

Hazardous Waste Hauler (Registration # 2843)
P.O. Box 292547 * Sacramento, CA 95829 * FAX 916-381-1573

Disposal Confirmation

Request for Transportation Received: 06/06/2007

Consultant Information

Company:	CRA West
Contact:	Daviya Saleme
Phone:	510-420-3319
Fax:	510-420-9170

Site Information

PO #	
Street Address:	2703 Martin Luther King W.
City, State, ZIP:	Oakland, CA
Customer:	Shell Oil Company RESA-0023-LDC
RIPR #:	61304
SAP # / Location:	NA
Incident #:	97093397
Location / WIC #:	NA
Environmental Engineer:	Denis Brown
Material Description:	Soil with gas
Estimated Quantity:	1 55 gallon drum
Service Requested Date:	On June 12th, 2007 noon. Coordinated with CRA and owner.
Disposal Facility:	Forward Landfill
Contact:	Joe
Phone:	800-204-4242
Approval #:	7164
Date of Disposal:	06/12/07
Actual Tonnage	0.12 tons
Transporter:	Manley & Sons Trucking, Inc.
Contact:	Jennifer Rogers
Phone:	916 381-6864
Fax:	916 381-1573
Invoice:	200706-12
Date of Invoice:	06/18/2007

MANLEY & SONS TRUCKING, INC.
SACRAMENTO, CA
DEMO
LOW BED - LOADERS
HAZARDOUS WASTE HAULING
AGGREGATES
SAND / GRAVEL
FILL DIRT
CA 0009430
(916) 381-6864

Hazardous Waste Hauler (Registration # 2843)
P.O. Box 292547 * Sacramento, CA 95829 * FAX 916-381-1573

Disposal Confirmation

Request for Transportation Received: 06/13/2007

Consultant Information

Company:	CRA West
Contact:	Daviya Saleme
Phone:	510-420-3319
Fax:	510-420-9170

Site Information

PO #	
Street Address:	2703 Martin Luther King Way.
City, State, ZIP:	Oakland, CA
Customer:	Shell Oil Company RESA-0023-LDC
RIPR #:	61304
SAP # / Location:	NA
Incident #:	97093397
Location / WIC #:	NA
Environmental Engineer:	Denis Brown
Material Description:	Soil with gas
Estimated Quantity:	1 5 gallon drum
Service Requested Date:	ASAP
Disposal Facility:	Forward Landfill
Contact:	Joe
Phone:	800-204-4242
Approval #:	7164
Date of Disposal:	07/23/2007
Actual Tonnage	0.01 tons
Transporter:	Manley & Sons Trucking, Inc.
Contact:	Jennifer Rogers
Phone:	916 381-6864
Fax:	916 381-1573
Invoice:	200707-16
Date of Invoice:	07/30/2007