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*By loprojectop at 4:48 pm, Jan 31, 2006*

January 31, 2006

**Denis L. Brown**

Jerry Wickham  
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1131 Harbor Bay Parkway, Suite 250  
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Re: Soil and Groundwater Investigation Report  
Shell-branded Service Station  
1601 Webster Street  
Alameda, California  
SAP Code 135032  
Incident No. 97564701  
ACHCSA No. 13-503

Dear Mr. Wickham:

Attached for your review and comment is a copy of the *Soil and Groundwater Investigation Report* for the above referenced site. 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

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

Re: **Soil and Groundwater Investigation Report**  
Shell-branded Service Station  
1601 Webster Street  
Alameda, California  
SAP Code 135032  
Incident No. 97564701  
**ACHCSA Fuel Case No. RO0002745**



Dear Mr. Wickham:

Cambria Environmental Technology, Inc. (Cambria) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the recent site investigation activities to further assess soil and groundwater conditions at the above-referenced site. The investigation was conducted in accordance with our July 13, 2005 *Site Investigation Work Plan*, which was requested by Alameda County Health Care Services Agency (ACHCSA) in correspondence dated May 13, 2005 in response to recommendations presented in Cambria's February 18, 2005 *Soil and Groundwater Investigation Report*. The work plan was approved by ACHCSA in correspondence dated August 8, 2005 and the work was performed in accordance with ACHCSA and Regional Water Quality Control Board (RWQCB) guidelines.


## **SITE LOCATION AND DESCRIPTION**

The subject property is an operating Shell-branded service station located on the northwest corner of Webster Street and Lincoln Avenue in Alameda, California (Figure 1). The station layout includes three underground storage tanks (USTs), a former waste oil UST, two current dispensers and two former dispenser islands, a station building, and a kiosk (Figure 2). The local topography is flat with a site elevation at approximately 13 feet above mean sea level. The site is surrounded by a mix of commercial and residential development.

**Subsurface Geology:** Boring logs from this site and the nearby former 76 service station site indicate that the site is underlain by predominantly sand and silty sands to 40 feet below grade (fbg), with lenses of silts, clays, clayey silts, and cemented sands occurring below 12 to 15 fbg. Prior reports identified the predominant sediments as the Merritt Sand, an unconsolidated Pleistocene beach and near shore deposit. A review of the boring logs shows consistent poorly sorted sand to silty sand in the water-bearing zone to the explored depth of 15 fbg.

**Groundwater Depth and Flow Direction:** Based on previous groundwater monitoring data at the site and the adjacent former 76 site, the depth to groundwater at the site has historically ranged from approximately 4.5 to 10.5 fbg, and the groundwater typically flows northerly to northeasterly.

## SITE BACKGROUND AND PROJECT HISTORY



A detailed discussion of the site conditions, project background, previous site investigations and remedial activities at this site were presented in Cambria's above-referenced February 18, 2005 *Soil and Groundwater Investigation Report*. For brevity in this document, **Appendix A** contains the detailed historical information, including the discussion of the August 2004 product release and subsequent emergency response and remedial efforts. An environmental investigation associated with a previous release at this site was granted case closure, as documented in ACHCSA's March 15, 1999 *Remedial Action Completion Certificate and Fuel Leak Site Case Closure* letter. The case closure letter also documented that up to 100 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) and 0.026 ppm benzene remained in the site soils, and up to 3,800 parts per billion (ppb) TPHg and 190 ppb benzene remained in the site groundwater upon closure.

In August 2004 during station upgrades, a large release of gasoline occurred and emergency response activities were initiated. Following the completion of the Fall 2004 emergency response activities, a soil and groundwater investigation was required. A summary of these activities and the ongoing investigation and remediation is discussed below.

**2004 Soil and Groundwater Investigation:** To investigate the impact from the August 2004 product release, Cambria installed eight soil borings (SB-1 through SB-8) at the site between November 30 and December 3, 2004, for the collection of soil and groundwater samples (Figure 2). The borings were augered to approximately 15 fbg. Soil samples were collected from each boring at 5 fbg and at 6.5 fbg (capillary fringe). Grab groundwater samples were collected from shallow groundwater from each boring at approximately 6.5 to 8.0 fbg. Discrete (hydropunch-type) groundwater samples were also collected from the deeper groundwater as follows: From 10 fbg in boring SB-1 and from 15 fbg in all borings except SB-3 because it did not provide recharge for sampling at that interval.

The maximum concentrations in soil were 740 ppm TPHg in SB-8-6.5', 1.5 ppm of methyl tertiary butyl ether (MTBE) in SB-4-6.5', and 53 ppm of ethanol in SB-8-6.5'. All of the other constituents were below the laboratory detection limits in soil. The maximum concentrations in the grab groundwater samples were 17,000 ppb of TPHg and 250 ppb of benzene in SB-8-W,

9,000 ppb of MTBE in SB-3-W, and 1,100 ppb of tertiary butyl alcohol (TBA) in SB-4-W. None of the other constituents were reported from the grab groundwater samples. The maximum concentrations in the discrete groundwater samples were 920 ppb of TPHg in SB-7W-15', 5.3 ppb of benzene in SB-8W-15', 300 ppb of MTBE in SB-1W-10', 2,000 ppb TBA in SB-4W-15', and 4.0 ppb tertiary amyl methyl ether (TAME) in SB-4W-15'. None of the other fuel oxygenates or ethanol were detected in any of the discrete groundwater samples from 10 or 15 fbg.



These results were reported in Cambria's February 18, 2005 *Soil and Groundwater Investigation Report* along with specific recommendations for additional investigation. The ACHCSA concurred with the recommendations and made additional requests in their May 13, 2005 correspondence. In response, Cambria prepared the July 13, 2005 *Site Investigation Work Plan* which ACHCSA approved in a letter dated August 8, 2005. The results of the field activities from this investigation are presented below.

## INVESTIGATION RESULTS

- Personnel Present*** Cambria Senior Staff Scientist Stewart Dalie directed field activities, working under the supervision of California Professional Geologist Ana Friel (PG 6452).
- Permits:*** Cambria obtained soil boring installation permit #W2005-0852 and well installation permits #W2005-0853 through #W2005-0858 from the Alameda County Public Works Agency (copies are included in Appendix B).
- Drilling Companies:*** Gregg Drilling, Inc. and Gregg In Situ, Inc. of Martinez, California (C57 License Nos. 485165 and 656407, respectfully).
- Drilling Dates:*** October 31, 2005 through November 3, 2005.
- Drilling Methods:*** Hollow-stem auger (HSA) and Cone Penetration Test (CPT).
- Number of Borings:*** Six HSA borings (S-2 through S-7) were advanced and converted into groundwater monitoring wells. Six CPT borings (SB-9 through SB-14) were advanced. Proposed borings SB-15 and SB-16 were not installed on the adjacent offsite property because the site is under construction of a commercial





development. The boring specifications are described in Table 1, and the locations are shown on Figure 3.

***Boring Depths:***

Borings S-2 through S-7 were advanced to 12 fbg. CPT borings SB-9 through SB-14 were extended to approximately 40 fbg.

***Soil Sampling Methods:***

Soils in borings S-2 through S-7 were logged continuously using the Unified Soil Classification System and the Munsell Soil Color Charts. Encountered soils are described on the exploratory boring logs presented in Appendix C. Unsaturated soil samples from the borings were collected at 5 fbg for chemical analysis and headspace analysis. Soil samples were screened for the presence of organic vapors using a photo-ionization detector (PID). PID readings are recorded on the boring logs.

The CPT borings were logged continuously using CPT electronic logging equipment. Unsaturated soil samples were collected from the CPT borings at 5 fbg for chemical analysis and headspace analysis. Boring logs for the CPT borings are included in Appendix D.

***Sediment Lithology:***

Asphalt, baserock and well-graded gravels with some silts and sands comprised the top 1.5 to 3 fbg in the majority of boring locations. Soils encountered below 1.5 to 3 fbg were predominantly poorly-graded sands and sands with silt to a depth of 12 to 15 fbg, underlain by predominantly poorly-graded sands and sands with silt with 6 to 18-inch lenses of silts, clays, clayey silts or cemented sands to a total explored depth of 40 fbg. A zone of clay and clayey silt was encountered in boring SB-11 between 5 and 10 fbg. A zone of clay, silt, clayey silt and sandy silt was encountered in boring SB-9 between 35 to 40 fbg.

***Groundwater Depths:***

During these drilling activities, groundwater at all locations was first encountered at depths ranging from 5.8 to 7.0 fbg.

***Groundwater Sampling:***

Grab groundwater samples were collected in each of the CPT borings from first encountered groundwater at depths ranging from 5.75 to 7.0 fbg. Depth-discrete groundwater samples were collected from each of the CPT borings with a hydropunch-type



sampler at interval depths of 14-18 fbg, 24-28 fbg, and 35-39 fbg.

***Chemical Analyses:***

Groundwater and select soil samples were analyzed by either State-certified laboratory Severn Trent Laboratories Inc. of Pleasanton, California, or State-certified laboratory TestAmerica Analytical Testing Corp., of Nashville, Tennessee for TPHg, benzene, toluene, ethyl-benzene, and total xylenes (BTEX), MTBE, TBA, TAME, ethyl tertiary butyl ether (ETBE), and di-isopropyl ether (DIPE) by EPA Method 8260B. In addition, groundwater samples from well TBN-W were also analyzed for 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), and ethanol.

***Soil Disposal:***

Soil generated during the field activities was stored on site, covered with plastic sheeting, sampled and profiled for disposal. On November 19 and 30, 2005, Manley and Sons Trucking, Inc. of Sacramento, California transported a total of 3.57 tons of soil to Allied Waste Industries' Forward Landfill in Manteca, California for disposal. The soil disposal documentation is included in Appendix E.

***Well Materials:***

The wells were constructed using four-inch diameter Schedule 40 PVC casing with a screen slot size of 0.020-inch and #2/12 Monterey sand.

***Screened Intervals:***

Wells S-2 through S-7 were screened from 4 to 12 fbg. Monitoring well construction details are presented on Table 1 and recorded on the boring logs (Appendix C).

***Well Development:***

Blaine Tech Services, Inc. (Blaine) of San Jose, California developed wells S-2 through S-7 on November 14, 2005 using surge block agitation and pump evacuation. The well development data is included in Appendix F. During development of well S-6 it was noted by Blaine that the well casing appeared damaged. Upon further investigation by Cambria, it was determined that well S-6 was damaged and needed replacement. Well S-6 was over-drilled and replaced on November 28, 2005, and was re-constructed in the same

borehole with the same specifications. The new well S-6 was developed by Blaine on January 19, 2006 (Appendix F).

***Well Sampling:***

Blaine gauged, purged, and sampled the tank backfill well TBW-N on September 15, October 17, and November 22, 2005. Blaine gauged, purged, and sampled wells S-2 through S-7 on November 22, 2005. A grab groundwater sample was collected from the damaged well S-6.. The well sampling data is included in the Blaine Table in Appendix F.



***Coordinated Monitoring:***

Coordinated monitoring was attempted with the nearby former 76 station #0843 at 1629 Webster Street. However, the wells at the former 76 station (MW-1 through MW-6 on Figures 3, 4, and 5) were sampled a day later on November 23, 2005. The laboratory analytical data for the former 76 station is included with historic results in the table in Appendix G.

***Wellhead Survey:***

Virgil Chavez Land Surveying of Vallejo, California surveyed the horizontal locations and top of casing elevations for wells S-2 through S-7 (including the replaced well S-6) relative to mean sea level on November 30, 2005. The results are presented in Appendix H.

***Groundwater Depths:***

Static groundwater depths gauged by Blaine during the November 22, 2005 sample event ranged from 5.82 to 7.70 feet below top of well casing.

***Groundwater Flow Direction:***

Cambria prepared a groundwater contour map using top of casing survey data and the depth to water level measurement data collected on November 22, 2005. Because their data was collected on a different date, data from the former 76 station wells was not used in contouring. The groundwater flow direction at the site on November 22, 2005 was to the north-northwest with an approximate hydraulic gradient of 0.0075 (Figure 5). This gradient is consistent with historical information for this site and for the former 76 station site.

## HYDROCARBON DISTRIBUTION IN SOIL

A total of 12 soil samples were analyzed; one soil sample from the capillary fringe at approximately 5 fbg in each boring. The only hydrocarbon constituent detected in the soil samples was 0.0080 parts per million (ppm) of total xylenes in boring SB-13 at 5 fbg. No TPHg, benzene, MTBE, TBA, DIPE, ETBE, or TAME was detected in any of the soil samples. Do saturated soil samples were submitted for chemical analyses.

The soil chemical analytical data is summarized in Table 2. The TPHg, benzene, and MTBE concentrations in the soil samples are presented on Figure 3, and the certified analytical laboratory reports and chain of custody documentation are included in Appendix I.



## HYDROCARBON DISTRIBUTION IN GROUNDWATER

***CPT Boring Groundwater Results:*** A total of 24 groundwater samples were analyzed from the six CPT borings (SB-9 through SB-14) collected from four different intervals in each boring. A discussion of the analytical data for each depth interval is presented below:

- First encountered groundwater at 6-11 fbg: TPHg was reported in boring SB-9 at 53 parts per billion (ppb). No BTEX was reported in any sample. MTBE was reported in all six borings at concentrations ranging from 0.55 to 4,800 ppb. TBA was reported in borings SB-10 and SB-11 at 1,300 and 290 ppb, respectively. TAME was reported in boring SB-10 at 3.7 ppb. No DIPE or ETBE was reported in samples from the first encountered groundwater.
- 14-18 fbg: TPHg was reported in boring SB-10 at 500 ppb. No BTEX was reported in any sample. MTBE was reported in all borings except SB-12 at concentrations ranging from 4.6 to 9,200 ppb. TBA was reported in borings SB-10 and SB-11 at 2,200 and 740 ppb, respectively. No DIPE, ETBE, or TAME was reported in samples from this interval.
- 24-28 fbg: No TPHg or BTEX was reported in the water samples from this interval. MTBE was reported in all borings except SB-12 at concentrations ranging from 1.1 to 7,800 ppb. No TBA, DIPE, ETBE, or TAME was reported in water samples from 24-28 fbg.
- 35-39 fbg: TPHg was reported in borings SB-10, SB-11, and SB-13 at 70, 67, and 64 ppb, respectively. No BTEX was reported in these samples. MTBE was reported in all borings except SB-12 at concentrations ranging from 1.0 to 87 ppb. TBA was

reported in borings SB-9, SB-10, and SB-11 at 21, 68, and 22 ppb, respectively. No DIPE, ETBE, or TAME was reported in water samples from 35-39 fbg.

The CPT boring groundwater chemical analytical data is summarized in Table 3. The TPHg, benzene, and MTBE concentrations from the CPT boring groundwater samples are presented on Figure 4, and the certified analytical laboratory reports and chain of custody documentation are included in Appendix I.



**Fourth Quarter 2005 Monitoring Well Groundwater Results:** Groundwater samples were collected from each of the six wells (S-2 through S-7), with the sample from well S-6 being a grab sample (as discussed above). TPHg was reported in all six wells at concentrations ranging from 996 to 51,100 ppb. Benzene was reported in wells S-2, S-5, S-6, and S-7 at concentrations ranging of 0.63, 0.90, 5.14, and 2,680 ppb, respectively. MTBE was reported in each well except S-6 at concentrations ranging from 1.49 to 3,730 ppb. TBA was reported in all six wells at concentrations ranging from 14.2 to 397 ppb. TAME, which has never been an additive in Shell gasoline, was reported in wells S-2, S-3, and S-4 at 0.570, 3.44, and 3.57 ppb, respectively.


The groundwater chemical analytical data for the wells is summarized in Blaine's table in Appendix F. The TPHg, benzene, and MTBE concentrations for the Shell site wells and the former 76 station wells are presented on Figure 5. The certified analytical laboratory reports and chain of custody documentation for the Shell data are included in Appendix F, and the data for the former 76 station is included in Appendix G.

**Groundwater Remediation:** Periodic groundwater extraction (GWE) and sampling from TBW-N continued on a monthly basis. Onyx Industrial performed monthly batch GWE events on September 12, October 10, and November 7, 2005. Blaine performed monthly gauging and sampling from TBW-N on September 15, October 17, and November 22, 2005. No separate-phase hydrocarbons (SPH) was observed in TBW-N during any of these events. To date, an estimated volume of 1,982.1 gallons of SPH were recovered as separate-phase liquid. As of the end of November 2005, an estimated mass of 128.8 pounds (an equivalent volume of 20.7 gallons) of dissolved TPHg was recovered in water. Cambria's water removal data and estimates of SPH and dissolved-phase product recovery are summarized in Table 4.

The groundwater chemical analytical data for well TBN-N is summarized in Blaine's table in Appendix F and the certified analytical laboratory reports and chain of custody documentation are also included in Appendix F.

## REVIEW OF POTENTIAL PREFERENTIAL PATHWAYS

In their correspondence dated May 13, 2005, the ACHCSA requested that an evaluation be performed to assess migration along utilities within Webster Street. To assist with that evaluation, a geologic cross section has been prepared (Figure 6).




At a minimum, the sanitary sewer line, storm drain, and water main beneath Webster Street do intersect the water table at this site. The groundwater flow direction across the site is to the north-northeast; thus, the impacted groundwater migrating with the natural gradient will intersect these utilities. Data from the CPT borings installed within Webster Street (Figure 3) show that the southeastern edge of the contaminant plume from this site is located between SB-12 and SB-13. Additional data points east of SB-13 and SB-14, and north of SB-14 would be needed to determine whether the MTBE plume is migrating preferentially along those utilities and not crossing to the downgradient (eastern) side of the utilities, or whether the plume is migrating with the natural groundwater movement regardless of the utilities. Data from the former 76 station wells, MW-6 and MW-5 further north within Webster Street, show impact at MW-6, but not at MW-5. MW-6 is located nearer to the former 76 station site and on the upgradient (western) side of the deeper utilities and MW-5 is located on the eastern side of the deeper utilities further downgradient. This may suggest that the impacted groundwater is not reaching the downgradient side of the utilities and confirm that the utilities are acting as a barrier to plume migration eastward. This hypothesis is supported by the historical data for these two wells, since MW-6 has historically contained significant concentrations of contaminants while MW-5 has remained relatively un-impacted. However, MW-5 is located an additional 80 feet beyond MW-6 and may simply reflect the distal edge of the plume.

Regarding the sanitary sewer lateral which is shown crossing the UST pit on the Shell site, the lateral line onsite is located within the top 1-3 fbg, and actually crosses the tops of the tanks. Once it reaches the property line, the lateral line angles downward to join the sewer main located approximately 8 fbg beneath Webster Street. Thus, in the vicinity of the August 2004 product release (the UST pit) the sewer lateral is not in contact with the groundwater. The lateral intersects the water table approximately 30-35 feet east of the UST excavation. Thus, it would not have any effect on the migration of contaminants in the immediate vicinity of the USTs.

## CONCLUSIONS

Based on the data from this and previous investigation and remediation efforts at this site, it is apparent that multiple releases have occurred and are being monitored by the recently installed wells. In general, maximum concentrations of TPHg are centered near the UST complex

(TBW-N), maximum benzene concentrations onsite are located south of the dispenser islands (S-7), and maximum MTBE concentrations are found at the northeastern property boundary (SB-9 and S-4).



The product release which occurred in August 2004 has not resulted in significant impact to groundwater based on the absence of SPH in any borings or wells and maximum TPHg concentrations in groundwater from the CPT borings of <2,500 ppb, and the maximum TPHg concentrations in groundwater from the monitoring wells is 4,700 ppb. Thus, the remedial efforts completed to date have been effective in mitigating the product removal. Further, no SPH has been observed in the backfill well since August 29, 2004, shortly following the release. Based on the data included in Table 4, an estimated volume of product loss was 2,084 gallons and an estimated volume of product recovered as SPH plus dissolved phase is 2,002.8 gallons, which is about 96% recovery of product.

Since MTBE was not a component of the produce released in August 2004, the MTBE detected in the borings downgradient of the USTs is not from that release, and the TPHg in those wells may also be from an older release or other source. The virtual absence of benzene downgradient of the USTs suggests that most of the impact at this site is historical. A comparison of the MTBE data in groundwater from the borings installed in November 2004 (SB-1, SB-2, SB-3) with the data from borings in similar locations installed in November 2005 (SB-9 and SB-11) shows significant attenuation of concentrations. This further supports that the contaminants are from a historical release and are undergoing natural attenuation. The presence of TBA in groundwater may be an indication that MTBE is undergoing biological degradation; however, further monitoring is needed to confirm that is the case. Since MTBE was removed from fuel in 2002, continued declining trends in MTBE concentrations are expected.

MTBE in groundwater has been delineated vertically to <100 ppb by the CPT borings which show that MTBE attenuates two orders of magnitude between the 24-28 fbg interval and the 35-39 fbg interval. The lateral extent of MTBE in groundwater is delineated to less than 10 ppb to the north by offsite wells at the former 76 site MW-2 and MW-1, to the south by Shell wells S-6 and S-7, and to the southeast by boring SB-12. MTBE in shallow groundwater remains undefined to the west of S-2, and to the east of SB-13 and SB-14. To the north of SB-14, further down Webster Street, MTBE is present in former 76 site well MW-6 at 1,700 ppb, but is below the detection in well MW-5; thus, MTBE is delineated to the north.

It should be noted that the groundwater samples from the monitoring wells were analyzed by a new Shell contract laboratory (TestAmerica) whereas the groundwater samples from the borings and previous investigation in 2004 and 2005 were analyzed by Shell contract laboratory STL. It

has been brought to Cambria's attention that these laboratories differ in the quantification of TPHg data which can result in higher concentrations reported by TestAmerica than by STL. Thus, the increase in TPHg concentration at TBW-N from 56,000 ppb to 105,000 ppb between third and fourth quarters 2005 may represent a seasonal fluctuation or it may reflect a change in the laboratory. Further, the change in laboratory could be the reason for the higher TPHg concentrations observed in wells S-3 (3,900 ppb) and S-4 (4,470 ppb) than in corresponding grab samples from nearby borings SB-10 (500 ppb) and SB-9 (<2,500 ppb), respectively, particularly since hydropunch or grab samples typically show higher concentrations than samples from a monitoring well.



## RECOMMENDATIONS

On behalf of Shell, Cambria makes the following recommendations for additional activities related to this site:

1. Analytical data for the former 76 station well, MW-1, would be beneficial to the monitoring of the Shell plume. Thus, Cambria recommends that Shell negotiate access to well MW-1 for quarterly monitoring activities.
2. To better understand the magnitude of the variation in analytical data received from different laboratories, Cambria recommends that duplicate samples be collected during the next monitoring event (February 2006) and submitted to both STL and TA for analysis of TPHg, BTEX, and MTBE.
3. Based on the remedial efforts performed and the significant recovery of product achieved, continued monthly extraction by vacops does not appear to be warranted. Cambria recommends discontinuing the monthly vacops from TBW-N. However, the monthly gauging for SPH and sampling of TBW-N should continue for at least one quarter. If SPH returns, or if concentrations in TBW-N increase significantly, or if the downgradient wells indicate increases in TPHg concentrations, then vacops or another remedial option could be considered.
4. In order to help direct the appropriate level of investigation or remediation necessary at this site, Cambria recommends performing a screening level risk evaluation. This should be done following receipt of the first quarter 2006 monitoring data that is analyzed by both laboratories, so that variations in constituent results can be assessed accordingly.
5. In conjunction with the risk evaluation, a work plan for further plume delineation should be prepared. Based on the results, the scope will likely include:



- Installing monitoring wells across Webster Street to delineate the MTBE plume to the east of SB-13 and SB-14, and to further evaluate the role of utilities with respect to the migration of MTBE in groundwater.
- Installing monitoring well(s) upgradient of well S-7 to assess the extent of TPHg and benzene to the south, or potential influence from the upgradient direction.
- Installing monitoring wells with deeper screened intervals at select locations to monitor the vertical extent of MTBE. Based on the data from various depths obtained from the CPT borings, Cambria suggests that these deeper wells be screened from 20–25 fbg.



**CLOSING**

Please contact Ana Friel at (707) 268-3812 if you have any questions or comments regarding this report.

Sincerely,

**Cambria Environmental Technology, Inc.**

*Sharon Mays*  
for

Dennis Daertschi  
Project Geologist

*Ana Friel*  
for

Ana Friel, PG  
Senior Project Geologist



# C A M B R I A

## Attachments

- Table 1. Well/Boring Data
- Table 2. Soil Analytical Data
- Table 3. Groundwater Analytical Data
- Table 4. Groundwater and Product Removal Data

- Figure 1. Vicinity/Sensitive Receptor Survey Map
- Figure 2. Site Plan/Historical Sample Location Map
- Figure 3. Soil Chemical Concentration Map
- Figure 4. Grab Groundwater Chemical Concentration Map
- Figure 5. Groundwater Contour/Monitoring Well Chemical Concentration Map
- Figure 6. Geologic Cross Section A-A'/Utility Location and Depth Map



- Appendix A. Summary: Site Background and Previous Investigations/Activities
- Appendix B. Permits
- Appendix C. Boring Logs
- Appendix D. Gregg In Situ, Inc. – Cone Penetration Test Data
- Appendix E. Disposal Documentation
- Appendix F. Blaine Tech Services, Inc. Well Development and Groundwater Monitoring Data
- Appendix G. Groundwater Monitoring Data – Former 76 Station # 0843, 1629 Webster St.
- Appendix H. Virgil Chavez Land Surveying Results
- Appendix I. Certified Analytical Reports

cc: Mr. Denis Brown, Shell Oil Products US  
Thomas H. Kosel, ConocoPhillips Risk Management & Remediation, 76 Broadway,  
Sacramento, CA 95818  
James C. Kirschner, ATC Associates, Inc. 6602 Owens Drive, Suite 100,  
Pleasanton, CA 94588 (consultant for ConocoPhillips)

**Table 1. Well/Boring Data, Shell-branded Service Station, 1601 Webster Street, Alameda, California**

Name	Type	Date	TOC	Total	Soil Sample (ft)		First Encountered GW		Screen	Screen Depth (ft)		Comments
		Installed	Elev (ft msl)	Depth (ft)	Incr. or	Depth(s)	Depth (ft)	Elev (ft msl)	Diam. (In)	Top	Bottom	
SB-1	Hydraulic Push	30-Nov-04	-	15	-	5, 6.5	6.5	-	-	-	-	
SB-2	Hydraulic Push	01-Dec-04	-	15	-	5, 6.5	7.0	-	-	-	-	
SB-3	Hydraulic Push	01-Dec-04	-	15	-	5, 6.5	7.0	-	-	-	-	
SB-4	Hydraulic Push	02-Dec-04	-	15	-	5, 6.5	7.9	-	-	-	-	
SB-5	Hydraulic Push	30-Nov-04	-	15	-	5, 6.5	7.2	-	-	-	-	
SB-6	Hydraulic Push	30-Nov-04	-	15	-	5, 6.5	7.0	-	-	-	-	
SB-7	Hydraulic Push	30-Nov-04	-	15	-	5, 6.5	8.0	-	-	-	-	
SB-8	Hydraulic Push	02-Dec-04	-	15	-	5, 6.5	7.1	-	-	-	-	
S-2	HSA/Well	01-Nov-05	19.73	12	-	5	6.0	13.73	4	4	12	
S-3	HSA/Well	01-Nov-05	19.14	12	-	5	6.2	12.94	4	4	12	
S-4	HSA/Well	01-Nov-05	18.16	12	-	5	6.0	12.16	4	4	12	
S-5	HSA/Well	01-Nov-05	18.68	12	-	5	5.8	12.88	4	4	12	
S-6	HSA/Well	28-Nov-05	19.32	12	-	5	6.8	12.52	4	4	12	Well installed 11-1-2005 was damaged & reconstructed on 11/28/05
S-7	HSA/Well	01-Nov-05	19.44	12	-	5	7.0	12.44	4	4	12	
SB-9	CPT Boring	03-Nov-05	-	40	-	5	6.5	-	-	-	-	
SB-10	CPT Boring	02-Nov-05	-	40	-	5	7.0	-	-	-	-	
SB-11	CPT Boring	03-Nov-05	-	40	-	5	7.0	-	-	-	-	
SB-12	CPT Boring	02-Nov-05	-	40	-	5	6.5	-	-	-	-	
SB-13	CPT Boring	02-Nov-05	-	40	-	5	6.25	-	-	-	-	
SB-14	CPT Boring	03-Nov-05	-	40	-	5	5.75	-	-	-	-	

Abbreviations:

TOC = Top of Casing referenced to mean sea level (msl)

GW = Groundwater

ft = feet

In = inches

C = Continuous

HSA = Hollow-stem auger

CPT = Cone penetration test

Table 2. Soil Analytical Data - Shell-branded Service Station, 1601 Webster Street, Alameda, California

Sample ID	Depth (fbg)	Date	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	TOG (mg/kg)
<i>Site Investigation 2005</i>																
S-2-5.0	5.0	31-Oct-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
S-3-5.0	5.0	31-Oct-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
S-4-5.0	5.0	31-Oct-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
S-5-5.0	5.0	31-Oct-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
S-6-5.0	5.0	31-Oct-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
S-7-5.0	5.0	31-Oct-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
SB-9-5.0	5.0	31-Oct-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
SB-10-5.0	5.0	31-Oct-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
SB-11-5.0	5.0	31-Oct-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
SB-12-5.0	5.0	02-Nov-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
SB-13-5.0	5.0	02-Nov-05	<1.0	<0.0050	<0.0050	<0.0050	<b>0.0080</b>	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
SB-14-5.0	5.0	02-Nov-05	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	NA	NA	NA	NA
<i>Subsurface Investigation 2004</i>																
SB-1-5'	5	30-Nov-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-1-6.5'	6.5	30-Nov-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA

Table 2. Soil Analytical Data - Shell-branded Service Station, 1601 Webster Street, Alameda, California

Sample ID	Depth (fbg)	Date	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	TOG (mg/kg)
SB-2-5'	5	01-Dec-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-2-6.5'	6.5	01-Dec-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.011	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-3-5'	5	01-Dec-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-3-6.5'	6.5	01-Dec-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-4-5'	5	02-Dec-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-4-6.5'	6.5	02-Dec-04	<50	<0.50	<0.50	<0.50	<0.50	1.5	<2.5	<1.0	<0.50	<0.50	<0.50	<0.50	<25	NA
SB-5-5'	5	30-Nov-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-5-6.5'	6.5	30-Nov-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-6-5'	5	30-Nov-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-6-6.5'	6.5	30-Nov-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.0099	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-7-5'	5	30-Nov-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-7-6.5'	6.5	30-Nov-04	6.2	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-8-5'	5	02-Dec-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	NA
SB-8-6.5'	6.5	02-Dec-04	740	<1.0	5.9	17	83	<1.0	<5.0	<2.0	<1.0	<1.0	<1.0	<1.0	53	NA
SB-9	N/A	No sample due to refusal at 3 fbg.														
SB-10	N/A	No sample due to refusal at 3 fbg.														
<b><u>Upgrade Soil Sampling 2004</u></b>																
P-1-3'	3.0	11-Aug-08	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
P-2-3'	3.0	10-Aug-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
P-3-3'	3.0	10-Aug-04	1,300	<0.50	<0.50	<0.50	49	<0.50	NA	NA	NA	NA	NA	NA	NA	NA

**Table 2. Soil Analytical Data - Shell-branded Service Station, 1601 Webster Street, Alameda, California**

Sample ID	Depth (ftg)	Date	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	TOG (mg/kg)
P-4-3'	3.0	10-Aug-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
P-5-3'	3.0	10-Aug-04	<1.0	<0.0050	<0.0050	<0.0050	<b>0.045</b>	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
D-1-2'	2.0	10-Aug-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
D-2-2'	2.0	10-Aug-04	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
<b><u>Upgrade Soil Sampling 1997</u></b>																
D-1	5.0	27-Aug-97	<b>10,000</b>	<5.0	<b>12</b>	<b>81</b>	<b>700</b>	<25	NA	NA	NA	NA	NA	NA	NA	NA
D-2	5.0	27-Aug-97	<b>11,000</b>	<b>6.3</b>	<b>7.8</b>	<b>96</b>	<b>440</b>	<25	NA	NA	NA	NA	NA	NA	NA	NA
D-2	10.0	27-Aug-97	<b>760</b>	<b>2.4</b>	<b>4.1</b>	<b>10</b>	<b>66</b>	<6.2	NA	NA	NA	NA	NA	NA	NA	NA
P-1	5.0	27-Aug-97	<b>140</b>	<0.25	<b>0.91</b>	<b>0.82</b>	<b>5.9</b>	<1.2	NA	NA	NA	NA	NA	NA	NA	NA
P-2	5.0	27-Aug-97	<b>3,600</b>	<b>1.9</b>	<b>1.9</b>	<b>36</b>	<b>220</b>	<6.2	NA	NA	NA	NA	NA	NA	NA	NA
P-3	5.0	27-Aug-97	<b>1,700</b>	<1.2	<1.2	<b>4</b>	<b>23</b>	<6.2	NA	NA	NA	NA	NA	NA	NA	NA
P-4	5.0	27-Aug-97	<b>230</b>	<0.25	<0.25	<b>1.2</b>	<b>3.4</b>	<1.2	NA	NA	NA	NA	NA	NA	NA	NA
<b><u>Monitoring Well Installation 1993</u></b>																
BH-J-5.5' (MW-3)	5.5	19-Feb-93	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-J-10' (MW-3)	10.0	19-Feb-93	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
<b><u>Subsurface Investigation 1992</u></b>																
BH-C-5.5'	5.5	12-Oct-92	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-C-11'	11.0	12-Oct-92	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30

Table 2. Soil Analytical Data - Shell-branded Service Station, 1601 Webster Street, Alameda, California

Sample ID	Depth (fbg)	Date	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	TOG (mg/kg)
BH-D-5.5'	5.5	12-Oct-92	100	<0.005	<0.005	1.8	5.4	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-D-10.5'	10.5	12-Oct-92	<0.5	<0.005	<0.005	0.007	0.032	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-E-5.5'	5.5	22-Oct-92	14	0.026	0.4	0.2	1.2	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-E-10.5'	10.5	22-Oct-92	170	<0.005	3.0	3.6	22	NA	NA	NA	NA	NA	NA	NA	NA	110
BH-E-13.5'	13.5	22-Oct-92	0.87	0.11	0.097	0.019	0.089	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-F-5.5'	5.5	22-Oct-92	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-F-10.5'	10.5	22-Oct-92	26	0.065	0.27	0.65	3.6	NA	NA	NA	NA	NA	NA	NA	NA	47
BH-G-5.5'	5.5	22-Oct-92	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-G-10'	10.0	22-Oct-92	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-H-5.5'	5.5	22-Oct-92	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-H-10'	10.0	22-Oct-92	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-I-5.5	5.5	22-Oct-92	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
BH-I-10.5	10.5	22-Oct-92	<0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<30
<b><u>Monitoring Well Installation 1990</u></b>																
BH-A (MW-1)	4.8	03-Apr-90	<1.0	<0.0025	0.0032	<0.0025	0.0030	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH-A (MW-1)	7.8	03-Apr-90	<1.0	<0.0025	0.0029	<0.0025	<0.0025	NA	NA	NA	NA	NA	NA	NA	NA	<50
BH-A (MW-1)	10.8	03-Apr-90	<1.0	0.0026	0.010	<0.0025	0.0037	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH-B (MW-2)	5.2	03-Apr-90	<1.0	<0.0025	0.0048	<0.0025	0.013	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH-B (MW-2)	6.8	03-Apr-90	1.3	0.0034	0.017	0.010	0.079	NA	NA	NA	NA	NA	NA	NA	NA	<50
BH-B (MW-2)	10.2	03-Apr-90	20	0.530	3.800	0.750	4.000	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH-B (MW-2)	15.2	03-Apr-90	32	0.15	1.8	0.67	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH-B (MW-2)	20.2	03-Apr-90	<1.0	0.0049	0.023	0.0047	0.029	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Table 2. Soil Analytical Data - Shell-branded Service Station, 1601 Webster Street, Alameda, California**

Sample ID	Depth (fbg)	Date	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	TOG (mg/kg)
<b><u>Monitoring Well Installation September 1987</u></b>																
S-1	3.5-5	04-Sep-87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
S-1	9-10.5	04-Sep-87	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	30
S-1	14-15.5	04-Sep-87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13
<b><u>Waste Oil UST Removal June 1987</u></b>																
#1	9.5	26-Jun-87	14	<50	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	133

**Notes and Abbreviations:**

fbg = feet below grade

parts per million = ppm

<x = Not detected at reporting limit x

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B. Prior to 2004, different methods were used.

Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B. Prior to 2004, different methods were used.

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8260B. Prior to 2004, analysis was by EPA Method 8020.

TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B

DIPE = Di-isopropyl ether analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether analyzed by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane by EPA Method 8260B. Prior to 2004, different methods were used.

EDB = Ethylene dibromide, Prior to 2004, different methods were used.

Ethanol by EPA Method 6010B



Table 3. Groundwater Analytical Data, Shell-branded Service Station, 1601 Webster Street, Alameda, California

Sample ID	Depth (fbg)	Date	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)	TBA (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	1,2-DCA (µg/l)	EDB (µg/l)	Ethanol (µg/l)	TOG (µg/l)
SB-9-6.5W	6 to 10	03-Nov-05	<1,300	<13	<13	<13	<25	3,500	<130	<50	<50	<50	NA	NA	NA	NA
SB-9-15W	14 to 18	03-Nov-05	<2,500	<25	<25	<25	<50	9,200	<250	<100	<100	<100	NA	NA	NA	NA
SB-9-27W	24 to 28	03-Nov-05	<2,500	<25	<25	<25	<50	7,800	<250	<100	<100	<100	NA	NA	NA	NA
SB-9-36W	35 to 39	03-Nov-05	<50	<0.50	<0.50	<0.50	<1.0	87	21	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-10-7W	6 to 10	02-Nov-05	53	<0.50	<0.50	<0.50	<1.0	3,000	1,300	<2.0	<2.0	3.7	NA	NA	NA	NA
SB-10-15W	14 to 18	02-Nov-05	500	<5.0	<5.0	<5.0	<10	690	2,200	<20	<20	<20	NA	NA	NA	NA
SB-10-25W	24 to 28	02-Nov-05	<1,300	<13	<13	<13	<25	2,700	<130	<50	<50	<50	NA	NA	NA	NA
SB-10-36W	35 to 39	02-Nov-05	70	<0.50	<0.50	<0.50	<1.0	76	68	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-11-7W	7 to 11	03-Nov-05	<1,300	<13	<13	<13	<25	4,800	290	<50	<50	<50	NA	NA	NA	NA
SB-11-15W	14 to 18	03-Nov-05	<2,000	<20	<20	<20	<40	2,200	740	<80	<80	<80	NA	NA	NA	NA
SB-11-27W	24 to 28	03-Nov-05	<1,000	<10	<10	<10	<20	2,300	<100	<40	<40	<40	NA	NA	NA	NA
SB-11-36W	35 to 39	03-Nov-05	67	<0.50	<0.50	<0.50	<1.0	23	22	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-12-6.5W	6 to 10	02-Nov-05	<50	<0.50	<0.50	<0.50	<1.0	0.55	<5.0	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-12-15W	14 to 18	02-Nov-05	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-12-25W	24 to 28	02-Nov-05	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-12-36W	35 to 39	02-Nov-05	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-13-6.25W	6 to 10	02-Nov-05	<2,500	<25	<25	<25	<50	4,100	<250	<100	<100	<100	NA	NA	NA	NA
SB-13-15W	14 to 18	02-Nov-05	<50	<0.50	<0.50	<0.50	<1.0	4.6	<5.0	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-13-25W	24 to 28	02-Nov-05	<50	<0.50	<0.50	<0.50	<1.0	1.1	<5.0	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-13-36W	35 to 39	02-Nov-05	64	<0.50	<0.50	<0.50	<1.0	1.0	<5.0	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-14-5.75W	6 to 10	03-Nov-05	<1,300	<13	<13	<13	<25	2,700	<130	<50	<50	<50	NA	NA	NA	NA
SB-14-15W	14 to 18	03-Nov-05	<2,500	<25	<25	<25	<50	5,900	<250	<100	<100	<100	NA	NA	NA	NA
SB-14-27W	24 to 28	03-Nov-05	<50	<0.50	<0.50	<0.50	<1.0	2.5	<5.0	<2.0	<2.0	<2.0	NA	NA	NA	NA
SB-14-36W	35 to 39	03-Nov-05	<50	<0.50	<0.50	<0.50	<1.0	3.7	<5.0	<2.0	<2.0	<2.0	NA	NA	NA	NA

**Table 3. Groundwater Analytical Data, Shell-branded Service Station, 1601 Webster Street, Alameda, California**

Sample ID	Depth (fbg)	Date	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)	TBA (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	1,2-DCA (µg/l)	EDB (µg/l)	Ethanol (µg/l)	TOG (µg/l)
<b><i>Subsurface Investigation 2004</i></b>																
SB-1-W	6.51 (g)	30-Nov-04	<2,500	<25	<25	<25	<50	6,000	<250	<100	<100	<100	<25	<25	<2,500	NA
SB-1W-10'	10	30-Nov-04	<250	<2.5	<2.5	<2.5	<5.0	300	<25	<10	<10	<10	<2.5	<2.5	<250	NA
SB-1W-15'	15	30-Nov-04	<13,000	<130	<130	<130	<250	24,000	1,700	<500	<500	<500	<130	<130	<13,000	NA
SB-2-W	6.95 (g)	01-Dec-04	<1,000	<10	<10	<10	<20	3,000	500	<40	<40	<40	<10	<10	<1,000	NA
SB-2W-15'	15	01-Dec-04	<1,300	<13	<13	<13	<25	2,000	420	<50	<50	<50	<13	<13	<13,000	NA
SB-3-W	7.01 (g)	01-Dec-04	<5,000	<50	<50	<50	<100	9,000	<500	<200	<200	<200	<50	<50	<5,000	NA
SB-4-W	7.85 (g)	02-Dec-04	<500	<5.0	<5.0	<5.0	<10	4,400	1,100	<20	<20	<20	<5.0	<5.0	<500	NA
SB-4W-15'	15	02-Dec-04	520	1.7	5.3	14	62	2,900	2,000	<2.0	<2.0	4.0	<0.50	<0.50	<50	NA
SB-5-W	7.21 (g)	30-Nov-04	<1,000	<10	<10	<10	<20	1,900	190	<40	<40	<40	<10	<10	<1,000	NA
SB-5W-15'	15	30-Nov-04	<1,000	<10	<10	<10	<20	2,000	340	<40	<40	<40	<10	<10	<1,000	NA
SB-6-W	7.01 (g)	30-Nov-04	2,000	0.61	0.88	59	57	14	5.5	<2.0	<2.0	<2.0	<0.50	<0.50	<50	NA
SB-6W-15'	15	30-Nov-04	<250	<2.5	<2.5	<2.5	<5.0	540	92	<10	<10	<10	<2.5	<2.5	<250	NA
SB-7-W	8.0 (g)	30-Nov-04	<500	<5.0	<5.0	<5.0	<10	990	180	<20	<20	<20	<5.0	<5.0	<500	NA
SB-7W-15'	15	30-Nov-04	920	0.54	1.1	28	19	13	<5.0	<2.0	<2.0	<2.0	<0.50	<0.50	<50	NA
SB-8-W	7.09 (g)	02-Dec-04	17,000	250	660	840	3,700	<10	<100	<40	<40	<40	<10	<10	<1,000	NA
SB-8W-15'	15	02-Dec-04	270	5.3	13	12	47	11	<5.0	<2.0	<2.0	<2.0	<0.50	<0.50	<50	NA
<b><i>Monitoring Well Installation 1993</i></b>																
MW-3		25-Feb-93	58	<0.5	<0.5	2.5	6.4	NA	NA	NA	NA	NA	1.5	NA	NA	140

**Table 3. Groundwater Analytical Data, Shell-branded Service Station, 1601 Webster Street, Alameda, California**

Sample ID	Depth (fbg)	Date	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)	TBA (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	1,2-DCA (µg/l)	EDB (µg/l)	Ethanol (µg/l)	TOG (µg/l)
<b><u>Subsurface Investigation 1992</u></b>																
BH-C		12-Oct-92	74	0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH-D		12-Oct-92	24,000	4,200	<0.5	4,400	2,800	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH-E		22-Oct-92	26,000	6,900	13,000	2,200	12,000	NA	NA	NA	NA	NA	NA	NA	NA	<7,000
BH-F		22-Oct-92	3,100	170	110	310	550	NA	NA	NA	NA	NA	NA	NA	NA	<14,000
BH-G		22-Oct-92	150	3.9	9.8	3.8	13	NA	NA	NA	NA	NA	NA	NA	NA	<6,000
BH-H		22-Oct-92	26,000	1,600	280	1,900	2,800	NA	NA	NA	NA	NA	NA	NA	NA	<6,000
BH-I		22-Oct-92	53	1.4	1.3	3.1	3.4	NA	NA	NA	NA	NA	NA	NA	NA	<8,000
<b><u>Subsurface Investigation / Monitoring Well Sampling 1990</u></b>																
S-1		11-Apr-90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1		11-Apr-90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2		11-Apr-90	580	20	4.9	1.2	73	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b><u>Monitoring Well Sampling 1989</u></b>																
S-1		11-Sep-89	<50	<0.5	<1	<1	<3	NA	NA	NA	NA	NA	NA	NA	NA	<1,000
<b><u>Monitoring Well Installation 1987</u></b>																
S-1		07-Sep-87	NA	<5	<5	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Table 3. Groundwater Analytical Data, Shell-branded Service Station, 1601 Webster Street, Alameda, California**

Sample ID	Depth (fbg)	Date	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)	TBA (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	1,2-DCA (µg/l)	EDB (µg/l)	Ethanol (µg/l)	TOG (µg/l)
<b><i>Waste Oil UST Removal 1987</i></b>																
#2		26-Jun-87	132,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	244,000
#2 (duplicate)		26-Jun-87	1,600	3.7	45	NA	200	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Notes and Abbreviations:**

fbg = feet below grade

parts per billion = ppb

<x = Not detected at reporting limit x

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B. Prior to 2004, different methods were used.

Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B. Prior to 2004, different methods were used.

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8260B

TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B

DIPE = Di-isopropyl ether analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether analyzed by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method 8260B. Prior to 2004, different methods were used.

EDB = Ethylene dibromide analyzed by EPA Method 8260B. Prior to 2004, different methods were used.

Ethanol by EPA Method 6010B

\* = flagged by the analytical laboratory because reporting limits were raised due to high levels of analyte present in the samples, analysis flag (L-2).

g = Grab sample collected at first encountered groundwater/piezometric surface

Table 4. Groundwater and Product Removal Data, Shell-branded Service Station, 1601 Webster Street, Alameda, California.

Date	Total Volume Hauled (gals)	Cumulative Volume (gals)	Measured Product Thickness in Vacuum Truck (ft)	Dissolved TPHg Conc. (ppm)	Est pounds TPHg removed in Dissolved Phase (lbs)	Estimated Volume of Product Removed as SPH (gal)	Estimated Volume of Product Removed as dissolved phase (gal)	Comments
								FUEL RELEASE ESTIMATE: UST gaging by SJ Weaver on 8/18 read 71.5 inches = 8,340 gallons, per tank chart. On 8/19 gaging by SJ Weaver read 55 inches = 6,256 gallons, per tank chart. Net est. Loss = 8,340-6,256 = 2,084 gallons.
8/19/2004	2,168	2,168	NM	120	2.17		0.36	Pumped from well into open Baker tank. Then tank emptied by PSC vacuum truck
8/19/2004	2,535	4,703	NM	120	2.54	915	0.42	Pumped from well into open Baker tank. Also pumped directly into Vacuum Truck. Then open Baker tank emptied by PSC
8/20/2004	0	4,703	NM	120	0.00	--	0.00	Pumped into closed Baker tank - none hauled.
8/21/2004	4,369	9,072	NM	120	4.37	50	0.72	Pumped into closed Baker tank, then began emptying closed tank by vacuum truck. Estimated SPH volume from similar data.
8/21/2004	3,654	12,726	0.67	120	3.66	773	0.60	From closed Baker tank and well. Volumes based on verbal report - missing bills of lading
8/21/2004	2,091	14,817	0.04	120	2.09	57	0.34	From well and baker tank. Volumes based on verbal report - missing bills of lading
8/22/2004	319	15,136	NM	120	0.32	NM	0.05	Baker Tank cleaning water.
8/22/2004	2,285	17,421	0.11	120	2.29	150	0.38	
8/23/2004	1,947	19,368	0.01	120	1.95	13	0.32	
8/24/2004	1,013	20,381	0.01	120	1.01	12	0.17	
8/25/2004	4,026	24,407		120	4.03		0.66	
8/26/2004	3,839	28,246		82	2.63		0.43	
8/27/2004	3,882	32,128		82	2.66		0.44	
8/28/2004	2,770	34,898		100	2.31		0.38	
8/29/2004	3,834	38,732		100	3.20		0.53	
8/30/2004	3,376	42,108		91	2.56	12	0.42	Half UST cleaning water and half groundwater from well. SPH amount estimated from 0.02' SPH in UST gaged on 8/21/04
8/31/2004	3,249	45,357		91	2.47		0.41	
9/1/2004	3,832	49,189		110	3.52		0.58	
9/2/2004	2,151	51,340		110	1.97		0.32	
9/3/2004	3,136	54,476		99	2.59		0.43	
9/4/2004	3,671	58,147		99	3.03		0.50	
9/5/2004	3,395	61,542		66	1.87		0.31	
9/6/2004	2,948	64,490		66	1.62		0.27	
9/7/2004	3,285	67,775		66	1.81		0.30	
9/8/2004	3,128	70,903		66	1.72		0.28	
9/9/2004	3,902	74,805		67	2.18		0.36	water from TBW-N, TBW-S, & TBW-E
9/10/2004	2,989	77,794		67	1.67		0.27	water from TBW-N, TBW-S, & TBW-E
9/13/2004	2,807	80,601		61	1.43		0.23	70-barrel truck
9/20/2004	4,266	84,867		120	4.27		0.70	
9/28/2004	4,691	89,558		99	3.88		0.64	
10/4/2004	4,050	93,608		80	2.70		0.44	
10/11/2004	3,121	96,729		57	1.48		0.24	
10/18/2004	3,597	100,326		68	2.04		0.34	
10/25/2004	4,127	104,453		81	2.79			2,641 additional gallons from tank cleaning were disposed of on 10/25/04
11/1/2004	5,047	109,500		86	3.62		0.59	
11/8/2004	2,178	111,678		100	1.82		0.30	
11/16/2004	4,891	116,569		83	3.39		0.56	concentration based on 11/23/04 sample
11/29/2004	4,531	121,100		160	6.05		0.99	concentration based on 11/30/04 sample
12/13/2004	5,208	126,308		120	5.21		0.86	concentration based on 12/15/04 sample
12/27/2004	4,800	131,108		100	4.01		0.66	concentration based on 12/27/04 sample
1/17/2005	3,580	134,688		86	2.57		0.42	concentration based on 1/17/05 sample
2/7/2005	2,389	137,077		97	1.93		0.32	concentration based on 2/4/05 sample
3/8/2005	4,843	141,920		94	3.80		0.62	concentration based on 3/3/05 sample
4/6/2005	4,711	146,631		27	1.06		0.17	concentration based on 4/12/05 sample
5/2/2005	4,706	151,337		42	1.65		0.27	concentration based on 5/13/05 sample
6/6/2005	5,011	156,348		46	1.92		0.32	concentration based on 6/10/05 sample
7/11/2005	4,627	160,975		48	1.85		0.30	concentration based on 7/15/05 sample
8/8/2005	4,785	165,760		36	1.44		0.24	concentration based on 8/17/05 sample
9/12/2005	4,992	170,752		20	0.83		0.14	concentration based on 9/15/05 sample
10/10/2005	5,181	175,933		59	2.55		0.42	concentration based on 10/17/05 sample
11/7/2005	4,821	180,754		105	4.22		0.69	concentration based on 11/22/05 sample

TOTALS 180,754

(gallons) Total Estimate of Volume of Liquid Removed

128.8

(pounds) Total estimated mass based on dissolved TPHg concentrations

1,982.1

(gallons) Total Estimated Volume accounted for as liquid SPH

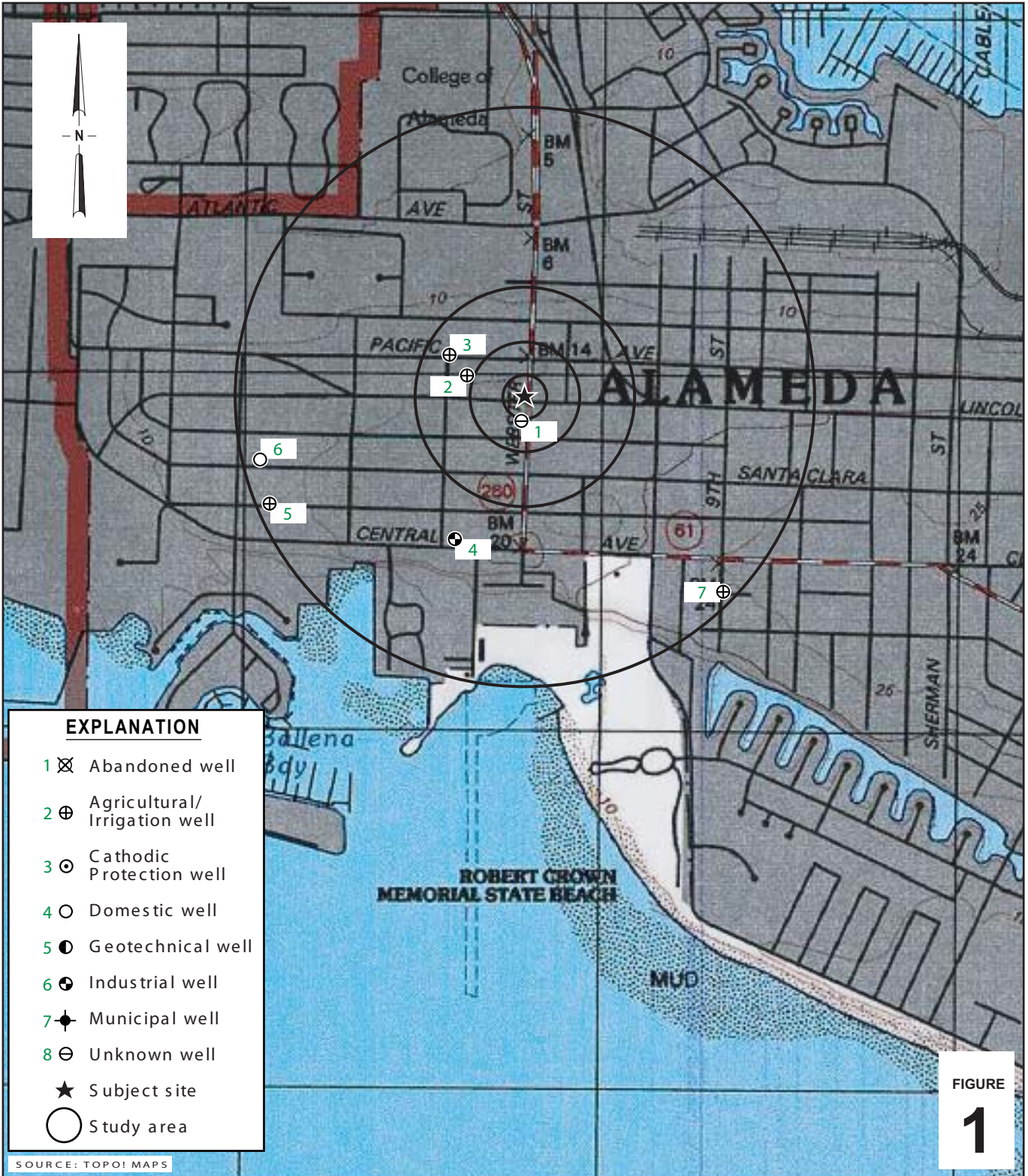
20.7

(gallons) Total estimated equivalent volume based on dissolved TPHg concentrations

NOTES:

Mass removal values are approximate only.

Pounds of TPHg/benzene/MTBE removal based on the calculation: (TPHg/benzene/MTBE concentration\* (ppb)) x gallons pumped x (8.3x10<sup>-9</sup> (liters/galxppounds/μg))



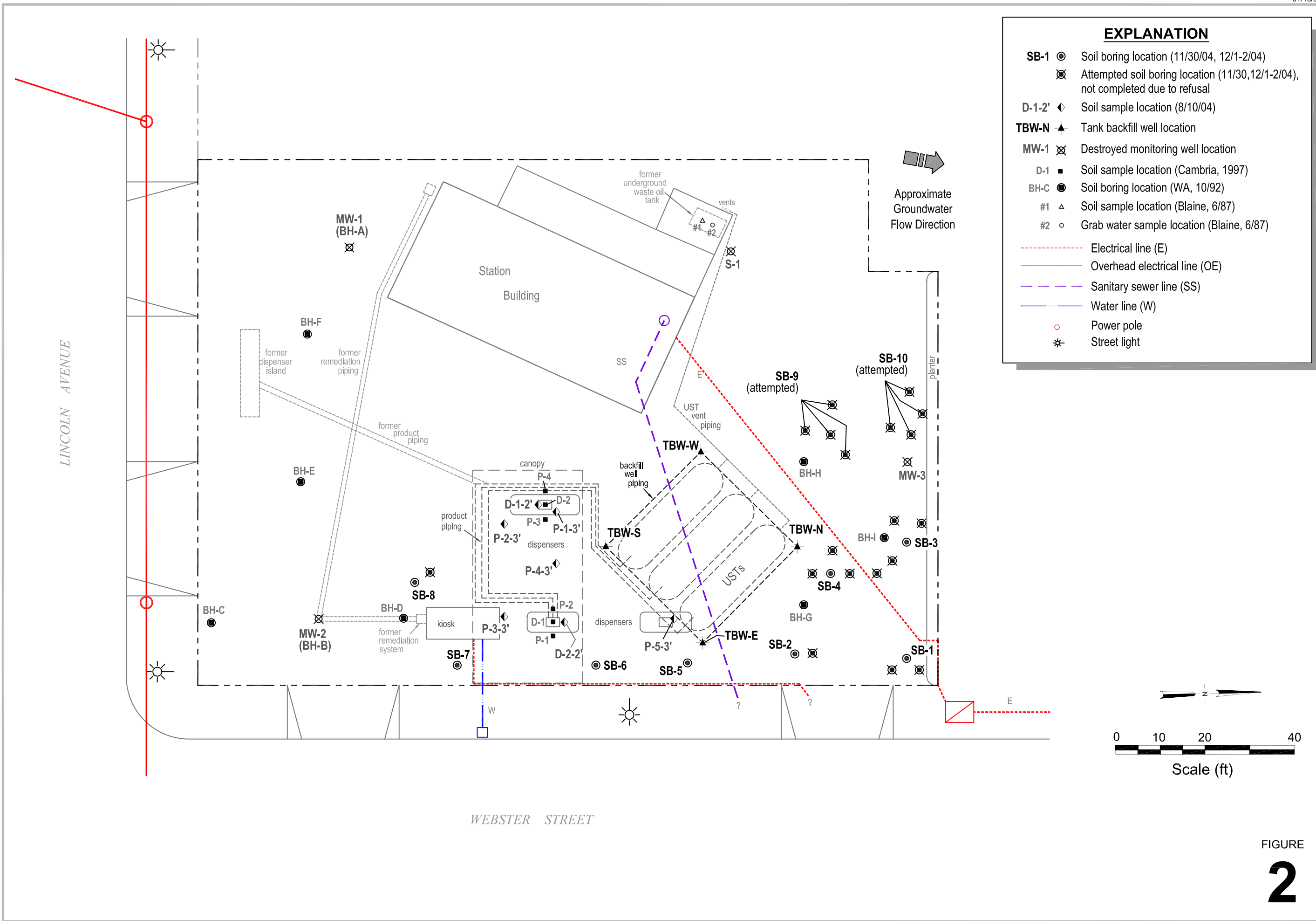
**Shell-branded Service Station**  
 1601 Webster Street  
 Alameda, California  
 Incident #97437680



C A M B R I A

**Vicinity/Sensitive Receptor  
 Survey Map**  
 (200, 500, and 1,000 Ft., and 1/2 Mile Radii)





EXPLANATION	
SB-1	Soil boring location (11/30/04, 12/1-2/04)
⊗	Attempted soil boring location (11/30,12/1-2/04), not completed due to refusal
D-1-2'	Soil sample location (8/10/04)
TBW-N	Tank backfill well location
MW-1	Destroyed monitoring well location
D-1	Soil sample location (Cambria, 1997)
BH-C	Soil boring location (WA, 10/92)
#1	Soil sample location (Blaine, 6/87)
#2	Grab water sample location (Blaine, 6/87)
- - -	Electrical line (E)
—	Overhead electrical line (OE)
- - -	Sanitary sewer line (SS)
—	Water line (W)
○	Power pole
*	Street light

Site Plan/Historical Sample Location Map



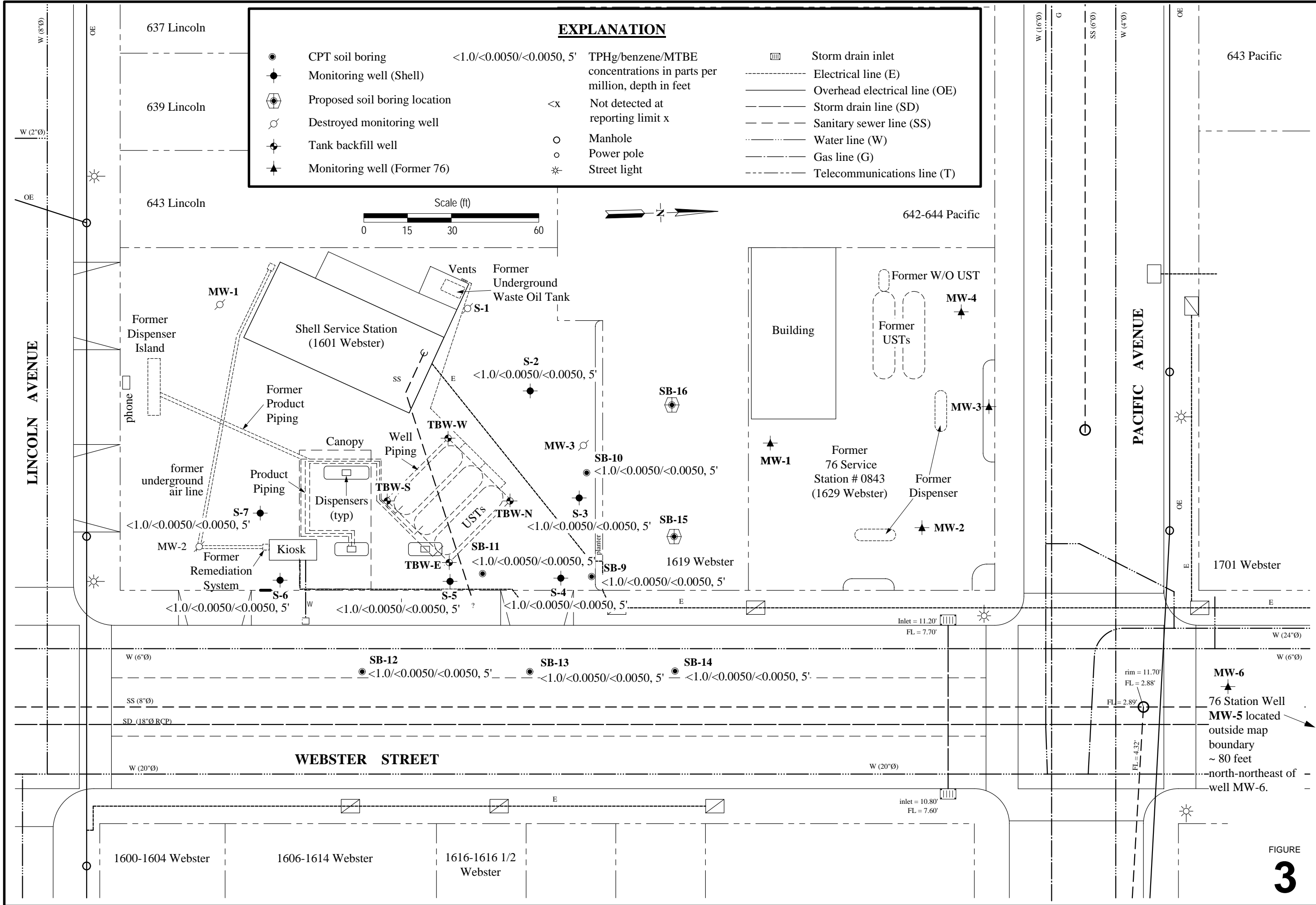
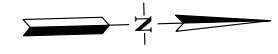
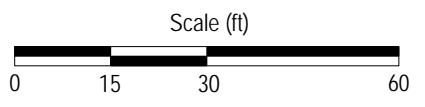
C A M B R I A

Shell-branded Service Station

1601 Webster Street  
Alameda, California  
Incident No.97564701

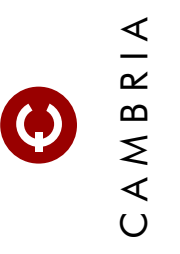
FIGURE 2

EXPLANATION			
●	CPT soil boring	<1.0/<0.0050/<0.0050, 5'	TPHg/benzene/MTBE concentrations in parts per million, depth in feet
⊙	Monitoring well (Shell)	<x	Not detected at reporting limit x
⊕	Proposed soil boring location	○	Manhole
⊘	Destroyed monitoring well	○	Power pole
⊙	Tank backfill well	⊙	Street light
⊙	Monitoring well (Former 76)		
▣	Storm drain inlet	---	Electrical line (E)
---	Overhead electrical line (OE)	---	Storm drain line (SD)
---	Sanitary sewer line (SS)	---	Water line (W)
---	Gas line (G)	---	Telecommunications line (T)



MW-6  
 76 Station Well  
 MW-5 located outside map boundary ~ 80 feet north-northeast of well MW-6.

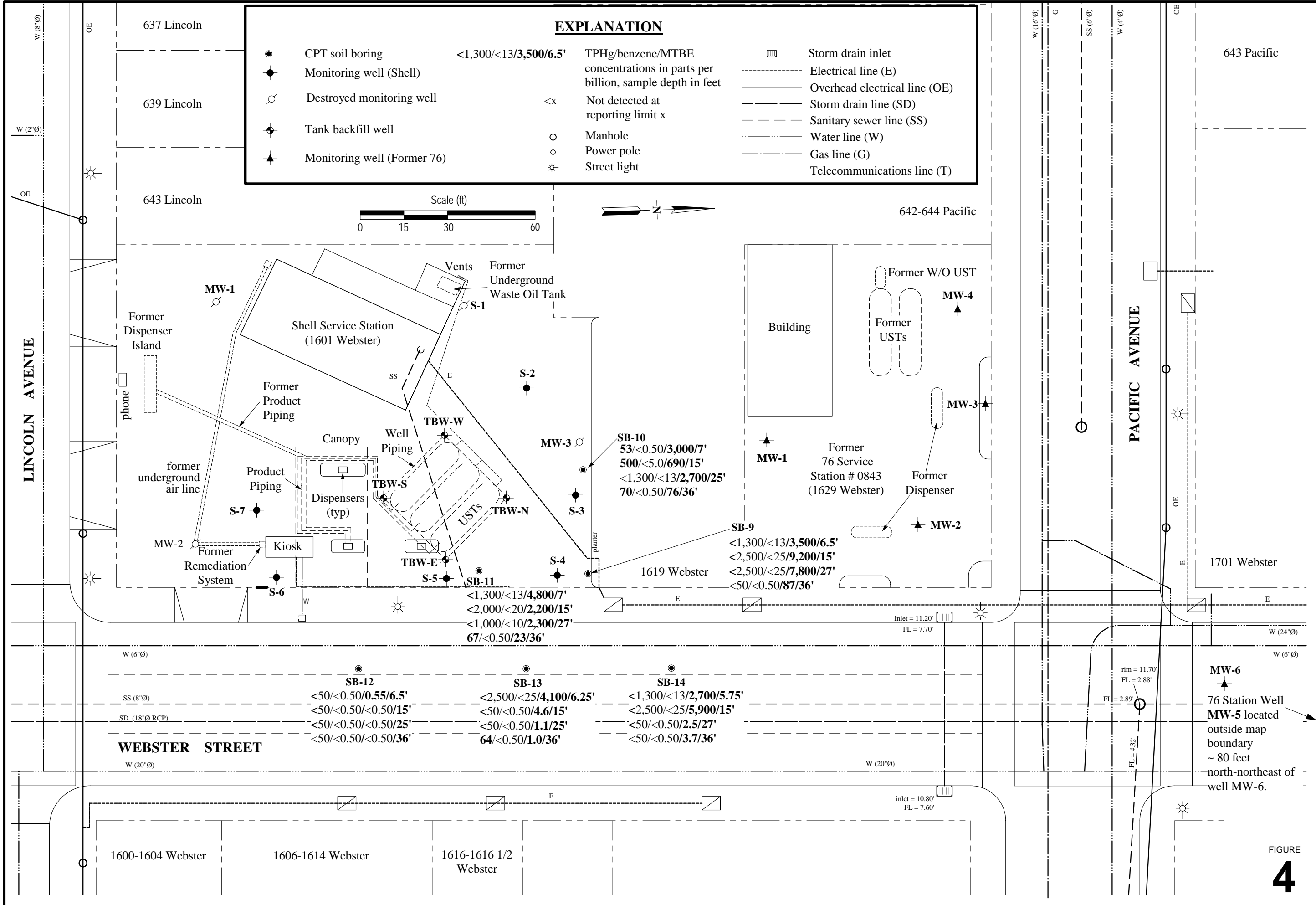
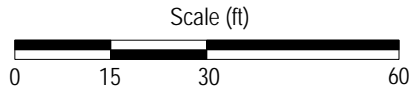
FIGURE  
**3**





### EXPLANATION

●	CPT soil boring	<1,300/<13/3,500/6.5'	TPHg/benzene/MTBE concentrations in parts per billion, sample depth in feet	▣	Storm drain inlet
●	Monitoring well (Shell)	<x	Not detected at reporting limit x	---	Electrical line (E)
○	Destroyed monitoring well	○	Manhole	---	Overhead electrical line (OE)
⊕	Tank backfill well	○	Power pole	---	Storm drain line (SD)
▲	Monitoring well (Former 76)	*	Street light	---	Sanitary sewer line (SS)
				---	Water line (W)
				---	Gas line (G)
				---	Telecommunications line (T)



Soil Boring ID	TPHg	Benzene	MTBE	Sample Depth (ft)
SB-12	<50	<0.50	0.55	6.5'
SB-13	<2,500	<25	4,100	6.25'
SB-14	<1,300	<13	2,700	5.75'
	<2,500	<25	5,900	15'
	<50	<0.50	1.1	25'
	<50	<0.50	2.5	27'
	<50	<0.50	3.7	36'

**MW-6**  
 76 Station Well  
 MW-5 located outside map boundary ~ 80 feet north-northeast of well MW-6.



FIGURE  
**4**

0467

### EXPLANATION

●	CPT soil boring	<x	Not detected at reporting limit x	▤	Storm drain inlet
●	Monitoring well (Shell)	↗	Groundwater elevation in feet referenced to mean sea level (ft msl). Arrows indicate approximate groundwater flow direction.	---	Electrical line (E)
○	Proposed soil boring location	12.03	Groundwater elevation in ft msl	---	Overhead electrical line (OE)
○	Destroyed monitoring well	996/0.630/406	TPHg/Benzene/MTBE concentrations in parts per billion (ppb)	---	Storm drain line (SD)
○	Tank backfill well	Approximate hydraulic gradient = 0.0075		---	Sanitary sewer line (SS)
▲	Monitoring well (former Tosco)			---	Water line (W)
○	Manhole			---	Gas line (G)
○	Power pole			---	Telecommunications line (T)
☼	Street light			NS	Not sampled

Note: 76 Station wells not used in contouring, gauged and sampled on November 23, 2005

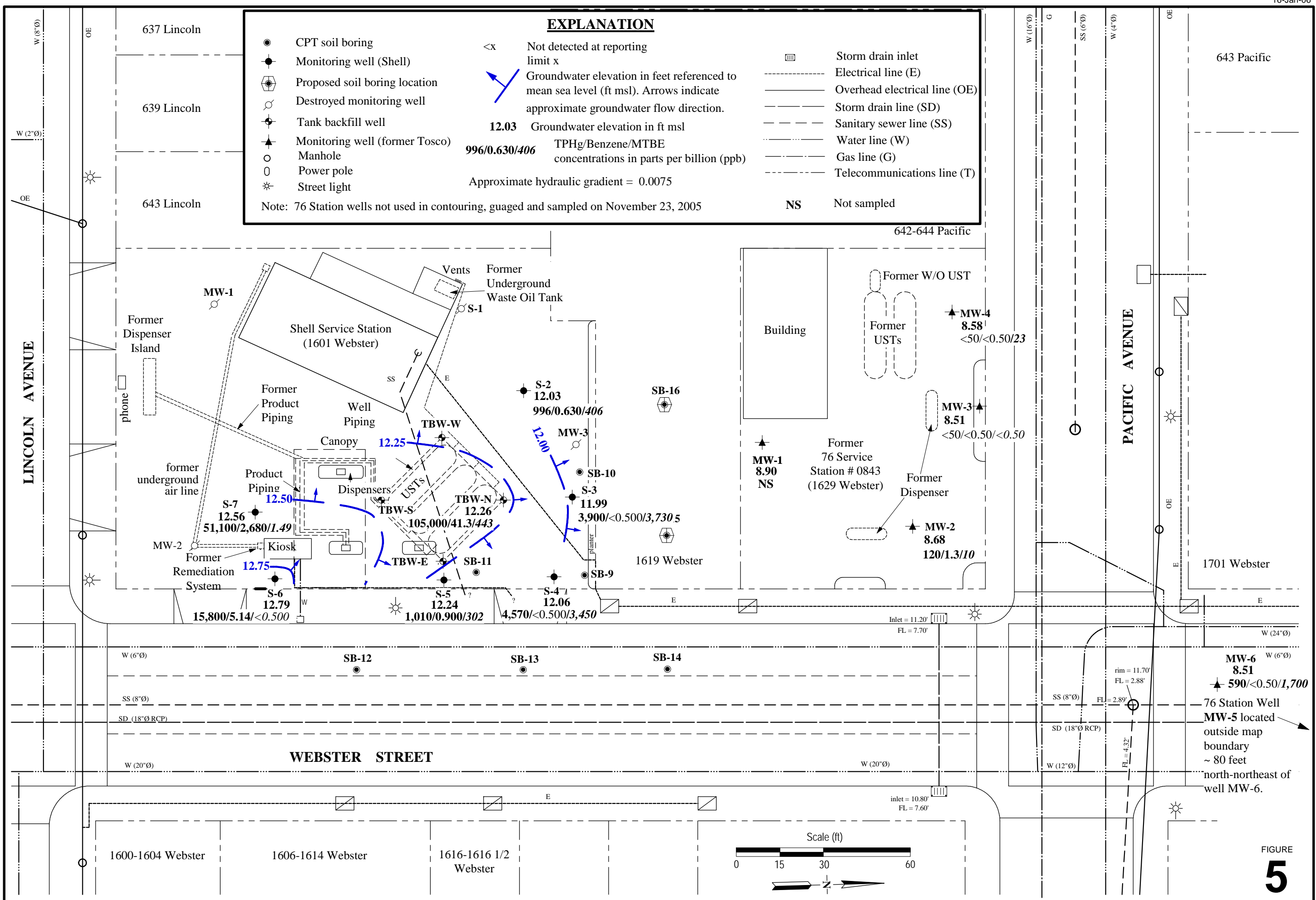
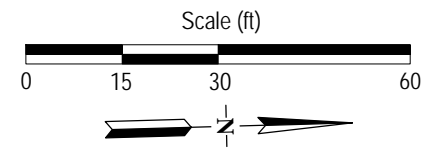
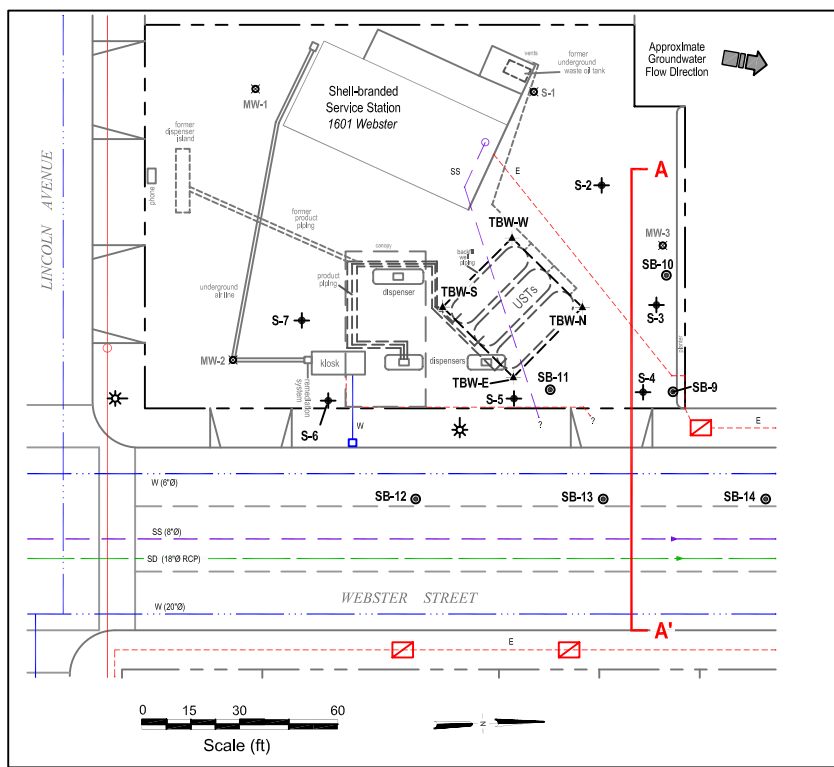
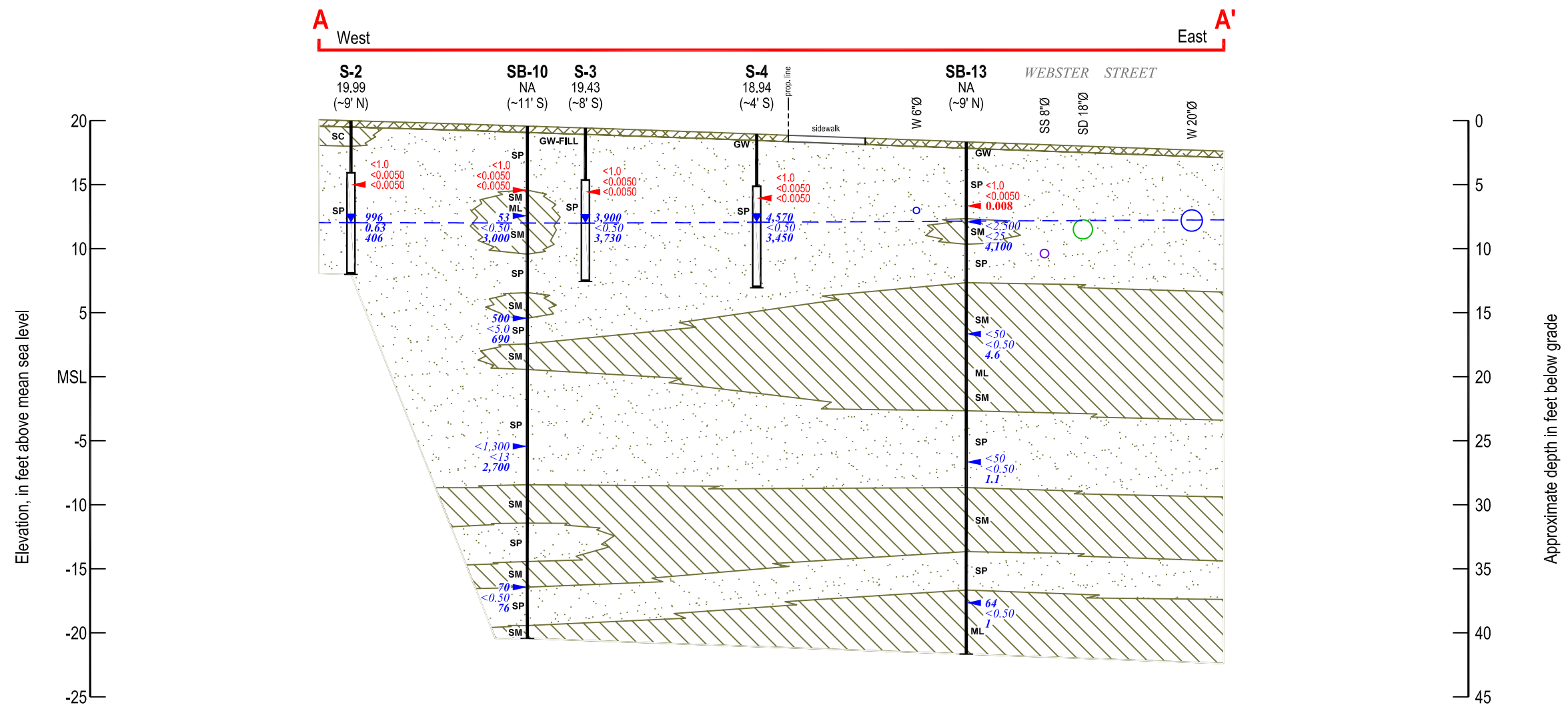


FIGURE 5





### EXPLANATION

<ul style="list-style-type: none"> <li> = Low Permeability Soils                     <ul style="list-style-type: none"> <li>ch - Inorganic Clay</li> <li>cl - Clay</li> <li>sc - Clayey Sand</li> </ul> </li> <li> = Moderate Permeability Soils                     <ul style="list-style-type: none"> <li>ml - Clayey Silt</li> <li>sm - Silty Sand</li> </ul> </li> <li> = High Permeability Soils                     <ul style="list-style-type: none"> <li>sp - Poorly Graded Sand</li> <li>sw - Well Graded Sand</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li> Approximate soil sample location</li> <li><span style="color: red;">TPHg</span> <span style="color: red;">Benzene</span> <span style="color: red;">MTBE</span> Hydrocarbon concentrations in soil, in parts per million sampled 10/05</li> <li> Approximate grab groundwater sample location</li> <li><span style="color: blue;">TPHg</span> <span style="color: blue;">Benzene</span> <span style="color: blue;">MTBE</span> Hydrocarbon concentrations in groundwater, in parts per billion</li> </ul>
--	--

<ul style="list-style-type: none"> <li> W 6"Ø Water line, 6" diameter</li> <li> W 20"Ø Water line, 20" diameter</li> </ul>	<ul style="list-style-type: none"> <li> SS 8"Ø Sanitary sewer line, 8" diameter</li> <li> SD 18"Ø Storm drain line, 18" diameter</li> </ul>
--	---

<ul style="list-style-type: none"> <li> Well Designation</li> <li> Rim Elevation, in feet above msl</li> <li> Offset distance from cross-section line</li> <li> Groundwater Monitoring Well</li> <li> Well Screen Interval</li> <li> Bottom of boring</li> </ul>	<ul style="list-style-type: none"> <li> Depth of groundwater - 11/05</li> <li> Inferred groundwater depth</li> </ul>
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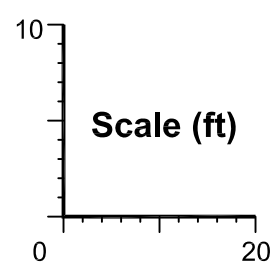


FIGURE  
**6**

## **Appendix A**

### **Summary: Site Background and Previous Investigations/Activities**

**APPENDIX A**  
**SUMMARY: Site Background & Previous Investigations/Activities**  
**Shell-branded Service Station**  
**1601 Webster Street, Alameda, California**

**SITE BACKGROUND**

**Site Conditions**

***Site Location and Topography:*** The site is located at the northwest corner of Webster Street and Lincoln Avenue in Alameda, California in a mixed commercial and residential area. The site is located approximately ½ mile from the San Francisco Bay. The site's address is known to Shell as 1601 Webster Street; however, the Alameda County Assessor's office lists the property address as 1607 Webster Street. Local topography is flat, and the site's elevation is approximately 13 ft above mean sea level.

***Property Owner:*** As requested in the ACHCSA's September 3, 2004 *Notice of Responsibility* letter the current fee title owner of the referenced property is identified on behalf of Shell in compliance with section 25297.15(a) of Chapter 6.7 of the Health Safety Code. The property owner is Shell (Equilon Enterprises LLC). Shell's address for tax purposes is P.O. Box 4369, Houston, TX 77210. Shell's address for environmental correspondence is: Denis Brown, Shell Oil Products US, 20945 South Wilmington Avenue, Carson, California 90810.

***Nearby Leaking Underground Fuel Tank (LUFT) Sites:*** According to the Geotracker database, several LUFT sites are present in the area near the site. These include:

- Former 76 Service Station 0843 at 1629 Webster Street, north of the site. According to the Geotracker database, this case is currently open due to a gasoline release, and is located downgradient of the subject Shell site.
- BP Oil Service Station #11104 at 1716 Webster Street, northeast of the site. Open case, gasoline, downgradient of the site.
- Chevron station at 1802 Webster Street, northeast of the site. Open case, gasoline, downgradient of the site.
- Devon Home Center, 1701 Webster Street, south of the site. Case closed on March 9, 1996, gasoline release, upgradient of the site.
- Ogden Service Corporation, 1700 Webster Street, southeast of the site. Case closed on June 24, 1992, waste oil/used oil release, upgradient of the site.
- Pacific Properties, 1628 Webster Street, southeast of the site. Case closed on August 28, 1996, gasoline release, upgradient of the site.
- Jiffy Lube, 1435 Webster Street, south of the site. Open case, upgradient of the site.

- Bank of America, 1528 Webster Street, south of the site. Case closed January 6, 1997, diesel release.
- Alameda Fire Station #2, 635 Pacific Avenue, north-northwest of the site. Case closed February 28, 1994, gasoline release.

**Subsurface Geology:** Boring logs from previous site investigations at the site and the nearby former 76 site indicate that the site is underlain by sand and silty sands to 21.5 feet below ground (fbg). Some prior reports identified the sediments as the Merritt Sand, an unconsolidated Pleistocene beach and near shore deposit. Review of the boring logs shows consistent poorly sorted sand to silty sand in the shallow water bearing zone.

**Groundwater Depth:** The historical depth to groundwater has previously ranged from approximately 4.5 fbg to 10.5 fbg. During August 2004 upgrade activities and emergency response actions, the depth to water in the tank backfill wells was measured at approximately 6 fbg before pumping of the wells.

**Groundwater Flow Direction:** Based on previous groundwater monitoring data at the site and the adjacent former 76 site, groundwater generally flows northerly to northeasterly. Review of the groundwater elevation contour maps indicates a consistent north to northeastern groundwater gradient.

## PREVIOUS SITE INVESTIGATIONS AND ACTIVITIES

**1987 Waste Oil Tank Removal:** In June 1987, a 550-gallon underground waste oil tank that was originally installed in 1962 was removed from the site (Figure A). Blaine Tech Services (Blaine) of San Jose, California reported that the tank contained more than 77 holes and that hydrocarbon sheen was observed on the water in the excavation. Soil samples from 9.5 fbg in the excavation contained 133 parts per million (ppm) petroleum oil and grease (POG), 14 ppm total petroleum hydrocarbons (TPH), and 29 ppm 1,1,1-trichloroethane (TCA). A grab water sample collected from the water surface at about 12.5 fbg contained 244 ppm POG, 132 ppm TPH, 11 ppm TCA, and 59 ppm methyl chloride. These results were reported in Blaine's July 16, 1987 *Field Sampling at Shell Station* letter report, and Blaine's June 26, 1989 letter report summarizing previously unpublished notes. A figure showing the locations of historical samples is enclosed.

**1987 Well S-1 Installation:** In September 1987, Pacific Environmental Group (PEG) of Santa Clara, California drilled one soil boring and installed groundwater monitoring well S-1 immediately down gradient of the former waste oil tank to assess whether hydrocarbons detected during the excavation were in groundwater (Figure A). TOG was detected in the boring from 3.5 and 15.5 fbg at a maximum concentration of 130 ppm at about 5 fbg. TPH as gasoline (TPHg) was detected at 50 ppm in soil at about 4 fbg. No halogenated volatile organic compounds

(HVOCs) were detected in soil or groundwater. These results were reported in PEG's October 23, 1987 letter report.

**1990 Well MW-1 and MW-2 Installation:** In April 1990, Weiss Associates (WA) installed wells MW-1 and MW-2 (Figure A). TPHg was detected at a maximum concentration in soils of 32 ppm in the boring for well MW-2, with the highest concentration detected below the water table. Unsaturated soil samples from the two borings contained less than 0.1 ppm benzene, ethylbenzene, toluene, and/or xylenes (BTEX). No POG or HVOCs were detected in soil from either boring. These results were reported in WA's July 6, 1990 *Subsurface Investigation at Shell Service Station* report.

**1992-1993 Subsurface Investigation:** On October 12 and 22, 1992 and February 19, 1993, WA installed eight soil borings, BH-C through BH-J, ranging from 12.5 to 21.5 fbg, and one monitoring well, MW-3 (Figure A). TPHg was detected at a maximum concentration in soil of 170 ppm from 10.5 fbg in boring BH-E. Benzene was detected at a maximum concentration in soil of 0.11 ppm from boring BH-E at 13.5 fbg. Grab groundwater samples from each boring resulted in a maximum TPHg concentration of 26,000 parts per billion (ppb), and a maximum benzene concentration of 6,900 ppb. These results were reported in WA's April 16, 1993 *Subsurface Investigation Report*.

**1997 Pipeline and Dispenser Upgrades:** On August 27, 1997, Cambria conducted soil sampling under the product piping and below dispenser locations on-site at approximately 5 fbg (Figure A). The highest concentrations in soil were found in sample D-2 at a depth of 5 fbg with 11,000 ppm TPHg, 6.3 ppm benzene, 7.8 ppm toluene, 96 ppm ethylbenzene and 440 ppm total xylenes. TPHg concentrations for the same location at a depth of 10-fbg decreased to 760 ppm. No MTBE was detected in the analytical samples. Cambria's October 8, 1997 *Pipeline and Dispenser Soil Sampling Report* presented the results.

**1998 Waste Oil Remote Fill Pipe Removal:** Paradiso Mechanical Inc., of San Leandro, California upgraded the site's waste oil system and removed the remote fill pipe associated with the waste oil tank. Cambria confirmed with ACHCSA regulator Rob Weston prior to the upgrade that no samples would be required as the pipeline was pressurized at above 20 psi and tested overnight, therefore requiring no sample to be taken. Cambria's December 1, 1998 *1998 Upgrade Site Inspection Report* presented the findings.

**Prior Groundwater Monitoring:** Groundwater was monitored and sampled generally quarterly prior to the destruction of the on-site monitoring wells in 1999 and subsequent case closure. Following initial sampling of well S-1 in September 1987, groundwater was monitored consistently between September 1989 and April 1998. During that time, the groundwater

gradient near the USTs was consistently north-easterly, ranging between north-northwest and northeast. Depth to water has ranged between approximately 4.5 and 10.5 fbg at the site.

***Prior Groundwater Remediation:*** Groundwater remediation by oxygenation was implemented by using an air compressor to inject air into MW-2 from March 2, 1995 until March 18, 1996.

***1999 Monitoring Well Abandonment and Case Closure:*** On January 15, 1999, Cambria oversaw the destruction of all four on-site monitoring wells to facilitate case closure with the ACHCSA. Cambria's February 26, 1999 *Monitoring Well Abandonment Report* documented the work. ACHCSA's March 15, 1999 *Remedial Action Completion Certification and Fuel Leak Site Case Closure* letters confirmed completion of site investigation and remedial action and granted UST case closure for the site. The case closure letter also documented that up to 100 ppm TPHg and 0.026 ppm benzene existed in soil, and up to 3,800 ppb TPHg and 190 ppb benzene existed in groundwater at the time of case closure.

***March 2004 Well Survey:*** At Shell's request, Cambria performed a search of California Department of Water Resources (DWR) records for water producing wells within one-half mile of the site. Monitor, cathodic, test, abandoned or destroyed wells were not researched. No public water supply (PWS) wells were identified from DWR records or from the Geotracker database. Records of seven non-PWS wells were found.

The nearest identified well was located by address approximately 150 ft south of the site. The DWR well record was undated, and did not record the well's intended use. Cambria's site inspection indicated that the address is currently occupied by a café, and the visit did not indicate the presence of a well; therefore the well is presumed to be abandoned. The next closest wells, irrigation wells installed in 1977, are estimated to be about 525 and 800 feet northwest of the site, and drilled to 25 and 32 fbg, respectively. Since groundwater is known to flow generally northward, these wells are cross-gradient of the site, and are therefore unlikely to be affected by impacted groundwater from the site. All other identified wells are located more than 1,000 feet to the southeast, south, and southwest (upgradient) of the site and therefore would not likely be affected by impacted groundwater from the site.

***August 2004 Fuel System Upgrades:*** S.J. Weaver Contracting, Inc. of Signal Hill, California upgraded the station's fuel dispensers, piping, and vapor recovery system during August 2004. Due to the high water table, groundwater from the UST excavation was pumped into a storage tank periodically, and was off-hauled as non-hazardous waste to Shell's Martinez refinery for disposal. Cambria collected soil samples beneath removed dispensers and piping on August 10, 2004. No benzene or MTBE was detected in any soil samples collected during these activities. TPHg was detected in one soil sample and xylenes were detected in two soil samples



from beneath fuel piping. The soil analytical results indicated that the highest residual hydrocarbon concentrations were located near the northwest corner of the kiosk building at sample location P-3-3' (Figure A). Due to the reported presence of TPHg and xylenes in soil, Shell filed an August 11, 2004 **Unauthorized Release Report Form** with ACHCSA.

Following re-installation of one fuel pump into one 10,000 gallon UST, S.J. Weaver identified a product loss in one 10,000-gallon UST by manual tank gauging. S.J. Weaver personnel pumped water from the tank excavation into an open-top storage tank on-site. As fuel had leaked out of the damaged UST, the pumped water contained free product. The resulting gasoline vapor concentrations warranted site evacuation, cessation of work, and emergency response. As a result, Shell's contractors conducted emergency response and remediation beginning on August 19, 2004. On August 19, 2004, the remaining fuel in the damaged UST was removed by a tanker truck, and groundwater pumping from one of the tank backfill wells was initiated. Cambria oversaw emergency response efforts including on-going groundwater extraction from an on-site tank backfill well to recover product lost during the release. The product loss, emergency response activities, and emergency remediation efforts associated with this event are presented in further detail in Cambria's November 30, 2004 *Soil & Groundwater Investigation Work Plan and Agency Response*. As a result of the product loss, Shell filed an August 19, 2004 **Unauthorized Release Report Form** with ACHCSA. In addition, the Alameda Fire Department filed a report with the California Governor's Office of Emergency Services. ACHCSA subsequently opened a new environmental case for the site on September 3, 2004 (ACHSA RO# 2745).

**August 2004 - Groundwater Extraction (GWE):** Following the August 2004 product release at the site, Cambria supervised Philip Services Corporation's (PSC) groundwater extraction (GWE) from the northern-most tank backfill well (TBW-N). Initially, groundwater was extracted several times per day from August 19 until August 23, 2004. Then, daily GWE was conducted from August 24 until September 10, 2004. From September 13 through November 16, GWE was conducted weekly. Cambria gauged product thickness in well TBW-N, and estimated product recovery by measurement of product thickness in the tanker truck while separate phase hydrocarbons (SPH) were present. Cambria periodically collected grab groundwater samples from TBW-N for analysis for TPHg, BTEX, and MTBE. On November 1, 2004, Cambria switched the GWE contractor to Onyx Industrial Services. Beginning with the November 8, 2004 sample, all samples are also analyzed for four additional oxygenate compounds DIPE, TAME, TBA, and ETBE, EDB, 1, 2-DCA and ethanol. The sample analytical results and evaluation, and details regarding product removal and groundwater extraction are also presented in Cambria's November 30, 2004 *Soil & Groundwater Investigation Work Plan and Agency Response*. As of January 2006, monthly GWE was still ongoing.

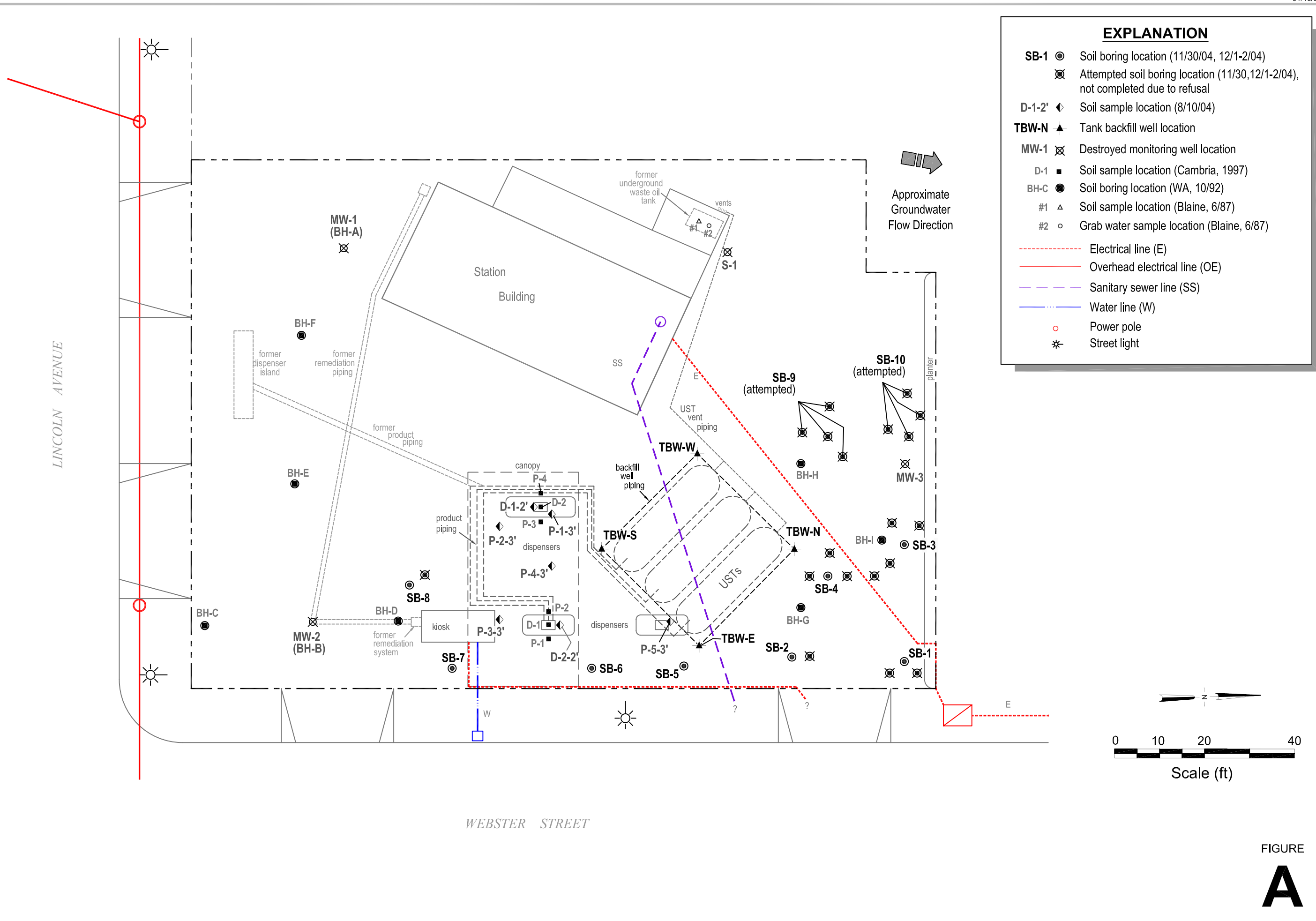
***November 2004 Soil and Groundwater Investigation:*** Between November 30 and December 3, 2004, Cambria installed eight soil borings (SB-1 through SB-8) at the site for the collection of soil and groundwater samples to further assess the impacts of the August 2004 product loss event (Figure A). The borings were augered to approximately 15 fbg. Soil samples were collected from each boring at 5 fbg and at 6.5 fbg (capillary fringe). Grab groundwater samples were collected from shallow groundwater from each boring at between 6.5 to 8.0 fbg. Discrete (hydropunch-type) groundwater samples were also collected from the deeper groundwater as follows: At 10 fbg in only one boring, SB-1, and at 15 fbg from all borings except SB-3, which did not produce any deeper groundwater samples.

The maximum concentrations in soil were 740 ppm of TPHg in SB-8-6.5', 1.5 ppm of MTBE in SB-4-6.5', and 53 ppm of ethanol in SB-8-6.5'. All of the other constituents were below the laboratory detection limits in soil.

The maximum concentrations in the grab groundwater samples were 17,000 ppb of TPHg and 250 ppb of benzene in SB-8-W, 9,000 ppb of MTBE in SB-3-W, and 1,100 ppb of TBA in SB-4-W. None of the other constituents were reported from the grab groundwater samples.

The maximum concentrations in the discrete groundwater samples were 920 ppb of TPHg in SB-7W-15', 5.3 ppb of benzene in SB-8W-15', 300 ppb of MTBE in SB-1W-10', 2,000 ppb TBA in SB-4W-15', and 4.0 ppb TAME in SB-4W-15'. None of the other fuel oxygenates or ethanol were detected in any of the discrete groundwater samples from 10 or 15 fbg.

These results were reported in Cambria's February 18, 2005 *Soil and Groundwater Investigation Report*.



## **Appendix 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:** 09/01/2005 **By** jamesy  
**Permits Issued:** W2005-0852 to W2005-0858

**Receipt Number:** WR2005-2086  
**Permits Valid from** 10/10/2005 to 11/03/2005

**Application Id:** 1125592252839  
**Site Location:** 1601 Webster St, Alameda, CA 94501  
**Project Start Date:** 10/10/2005

**City of Project Site:** Alameda  
**Completion Date:** 11/03/2005

**Applicant:** Cambria Environmental Inc - Stewart A Dalie IV  
5900 Hollis St, Emeryville, CA 94608  
**Property Owner:** Shell Oil Products Co.  
20945 Wilmington, Carson, CA 90801  
**Client:** \*\* same as Property Owner \*\*

**Phone:** 510-420-3339  
**Phone:** 707-805-0251

**Total Due:** \$2000.00  
**Total Amount Paid:** \$2000.00  
**Paid By:** CHECK **PAID IN FULL**

## Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 8 Boreholes  
Driller: Gregg Drilling - Lic #: 485165 - Method: other

**Work Total: \$200.00**

### Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2005-0852	09/01/2005	01/08/2006	8	2.50 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.
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. Applicant shall contact George Bolton for a inspection time at 510-670-5594 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.
4. 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.

Well Construction-Monitoring-Monitoring - 6 Wells

Driller: Gregg Drilling - Lic #: 485165 - Method: auger

**Work Total: \$1800.00**

### Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2005-0853	09/01/2005	01/08/2006	S2	10.00 in.	4.00 in.	5.00 ft	15.00 ft
W2005-	09/01/2005	01/08/2006	S3	10.00 in.	4.00 in.	5.00 ft	15.00 ft

## Alameda County Public Works Agency - Water Resources Well Permit

0854

W2005- 09/01/2005 01/08/2006 S4 10.00 in. 4.00 in. 5.00 ft 15.00 ft  
0855

W2005- 09/01/2005 01/08/2006 S5 10.00 in. 4.00 in. 5.00 ft 15.00 ft  
0856

W2005- 09/01/2005 01/08/2006 S6 10.00 in. 4.00 in. 5.00 ft 15.00 ft  
0857

W2005- 09/01/2005 01/08/2006 S7 10.00 in. 4.00 in. 5.00 ft 15.00 ft  
0858

### 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 statues 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 wok is being completed.
  3. Prior to any drilling activities 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 or agreements required for that Federal, State, County or to the City and follow all City or County Ordinances No work shall begin until all the permits and requirements have been approved or obtained.
  4. 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.
  5. Applicant shall contact George Bolton for a inspection time at 510-670-5594 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.
  6. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
  7. Minimum surface seal thickness is two inches of cement grout placed by tremie
  8. Minimum seal depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
-

# PROGRAMS AND SERVICES

## Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at:

399 Elmhurst Street

Hayward, CA 94544

For Driving Directions or General Info, Please Contact 510-670-5480 or wells@acpwa.org

For Drilling Permit information and process contact James Yoo at

Phone: 510-670-6633

FAX: 510-782-1939

Email: Jamesy@acpwa.org

Alameda County Public Works is the administering agency of General Ordinance Code, Chapter 6.88 . The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by California Water Code. The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

**Drilling Permit Jurisdictions in Alameda County:** There are four jurisdictions in Alameda County.

Location:	Agency with Jurisdiction	Contact Number
Berkeley	City of Berkeley	Ph: 510-981-7460 Fax: 510-540-5672
Fremont, Newark, Union City	Alameda County Water District	Ph: 510-668-4460 Fax: 510-651-1760
Pleasanton, Dublin, Livermore, Sunol	Zone 7 Water Agency	Ph: 925-454-5000 Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of **Oakland, Alameda, Piedmont, Emeryville, Albany, San Leandro, San Lorenzo, Castro Valley, and Hayward** . The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

**Permits** are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed permit application (30 Kb)\* , along with a site map, should be submitted at least **ten (10) working days prior to the planned start of work**. Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

Complete Permit Application Check List (24 Kb)\*

### Fees

**Beginning April 11, 2005** , the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells, shall cost \$300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost \$200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: **Treasurer, County of Alameda**

## **Permit Fees are exempt to State & Federal Projects**

Applicants shall submit a letter from the agency requesting the fee exemption.

### **Scheduling Work/Inspections:**

Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact **George Bolton at 510-670-5594** to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

### **Request for Permit Extension:**

Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

### **Cancel a Drilling Permit:**

Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

### **Refunds/Service Charge:**

A service charge of \$25.00 dollars for the first check returned and \$35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of \$50.00 (fifty Dollars). To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed \$500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is \$1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors.

The forms to request for refunds under \$500.00 (Five Hundred Dollars) are available at this office or any County Offices.

If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.



## **Enforcement**

Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars (\$500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

### **Enforcement actions will be determined by this office on a case-by-case basis**

Drilling without a permit shall be the cost of the permit(s) and a fine of \$500.00 (Five Hundred Dollars).

**Well Completion Reports** (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies. Links to pertinent forms are provided below.

Well Completion Report Form\*

Well Owner's Request Form for Previously Filed Forms (41Kb)\*

Government Authorization Form for the Release of Forms (46 Kb)\*

Site Hazard Information Form (51 Kb)\*

\* Adobe PDF Reader is Required.

## **Appendix C**

### **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		GW	Well-graded gravels, gravel-sand mixtures, little or no fines	
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines	
			GM	Silty gravels, gravel-sand-silt mixtures	
	Sand and Sandy Soils	Gravels with Fines ( ≥ 15% fines)		GC	Clayey gravels, gravel-sand-clay mixtures
				SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sand, little or no fines
Fine-Grained Soils (>50% Silts and/or Clays)	Silty Sands		SM	Silty sands, sand-silt mixtures	
			SC	Clayey sands, sand-clay mixtures	
			ML	Inorganic silts, very fine sands, silty or clayey fine sands, clayey silts with slight plasticity	
	Silty Clays		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	
			MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils	
Highly Organic Soils	Clays		CH	Inorganic clays of high plasticity	
			OH	Organic clays of medium to high plasticity, organic silts	
			PT	Peat, humus, swamp soils with high organic contents	

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



CAMBRIA



Cambria Environmental Technology, Inc.  
 270 Perkins Street  
 Sonoma, CA 95476  
 Telephone: 707-935-4850  
 Fax: 707-935-6649

# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	S-2
<b>JOB/SITE NAME</b>	Shell-branded Service Station	<b>DRILLING STARTED</b>	31-Oct-05
<b>LOCATION</b>	1601 Webster Street, Alameda, California	<b>DRILLING COMPLETED</b>	01-Nov-05
<b>PROJECT NUMBER</b>	0467	<b>WELL DEVELOPMENT DATE (YIELD)</b>	14-Nov-05 (26 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	19.99 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	19.73 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	4 to 12 fbg
<b>LOGGED BY</b>	Stewart A. Dalie IV	<b>DEPTH TO WATER (First Encountered)</b>	6.0 ft (01-Nov-05) ▽
<b>REVIEWED BY</b>	Ana Friel	<b>DEPTH TO WATER (Static)</b>	7.70 ft (22-Nov-05) ▽
<b>REMARKS</b>	Air knifed to 5 fbg.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S. GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		S-2-5.0	0.6	SC	ASPHALT	0.6	<p>Portland Type I/II            Bentonite Seal            Monterey Sand #2/12            4"-diam., 0.020" Slotted Schedule 40 PVC            Bottom of Boring @ 12 ft</p>
0			2.0		Clayey SAND (SC); brown (7.5YR 5/3); loose; moist; 15% clay, 85% fine sand; low plasticity.	2.0	
0			5		SAND (SP); light brown (7.5YR 6/3); loose; moist; 100% fine sand.	▽	
0			10	SP	@ 8.5' - dark brown (7.5YR 3/3).	▽	
0			12.0			12.0	

WELL LOG (PID) I:\ALAMED-1\GINTALAMEDA.GPJ DEFAULT.GDT 12/19/05



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	S-3
<b>JOB/SITE NAME</b>	Shell-branded Service Station	<b>DRILLING STARTED</b>	31-Oct-05
<b>LOCATION</b>	1601 Webster Street, Alameda, California	<b>DRILLING COMPLETED</b>	01-Nov-05
<b>PROJECT NUMBER</b>	0467	<b>WELL DEVELOPMENT DATE (YIELD)</b>	14-Nov-05 (30 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	19.43 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	19.14 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	4 to 12 fbg
<b>LOGGED BY</b>	Stewart A. Dalle IV	<b>DEPTH TO WATER (First Encountered)</b>	6.2 ft (01-Nov-05) ▽
<b>REVIEWED BY</b>	Ana Friel	<b>DEPTH TO WATER (Static)</b>	7.15 ft (22-Nov-05) ▽
<b>REMARKS</b>	Air knifed to 5 fbg.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							<b>ASPHALT</b>	0.8	<p>Portland Type I/II            Bentonite Seal            Monterey Sand #2/12            4"-diam., 0.020" Slotted Schedule 40 PVC            Bottom of Boring @ 12 ft</p>
							<b>FILL</b> ; brown (7.5YR 4/3); loose; moist; 50% silt, 20% sand, 30% gravel; misc brick & debris. <b>SAND (SP)</b> ; light brown (7.5YR 3/2); loose; moist; 10% clay, 90% fine sand.	1.5	
0		S-3-5.0		5		SP		▽	
0								▽	
0.8									
1.0									
0.8								12.0	

WELL LOG (PID) I:\ALAMEDA-1\GINTALAMEDA.GPJ DEFAULT.GDT 12/19/05



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# BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	S-4
JOB/SITE NAME	Shell-branded Service Station	DRILLING STARTED	31-Oct-05
LOCATION	1601 Webster Street, Alameda, California	DRILLING COMPLETED	01-Nov-05
PROJECT NUMBER	0467	WELL DEVELOPMENT DATE (YIELD)	14-Nov-05 (35 gallons)
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	18.94 ft above msl
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION	18.16 ft above msl
BORING DIAMETER	10"	SCREENED INTERVAL	4 to 12 fbg
LOGGED BY	Stewart A. Dalie IV	DEPTH TO WATER (First Encountered)	6.0 ft (01-Nov-05)
REVIEWED BY	Ana Friel	DEPTH TO WATER (Static)	6.10 ft (22-Nov-05)
REMARKS	Air knifed to 5 fbg.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		S-4-5.0		5	SP		<b>ASPHALT SAND (SP)</b> ; dark brown (7.5YR 2.5/3); loose; moist; 10% clay, 90% fine sand  @ 7' - 100% fine sand.	0.6	<ul style="list-style-type: none"> <li>Portland Type I/II</li> <li>Bentonite Seal</li> <li>Monterey Sand #2/12</li> <li>4"-diam., 0.020" Slotted Schedule 40 PVC</li> </ul>
0									
0.1				10					
0.8								12.0	Bottom of Boring @ 12 ft

WELL LOG (PID) I:\ALAMEDA-1\GINT\ALAMEDA.GPJ\_DEFAULT.GDT 1/26/06



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	S-5
<b>JOB/SITE NAME</b>	Shell-branded Service Station	<b>DRILLING STARTED</b>	31-Oct-05
<b>LOCATION</b>	1601 Webster Street, Alameda, California	<b>DRILLING COMPLETED</b>	01-Nov-05
<b>PROJECT NUMBER</b>	0467	<b>WELL DEVELOPMENT DATE (YIELD)</b>	14-Nov-05 (28.8 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	19.17 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	18.68 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	4 to 12 fbg
<b>LOGGED BY</b>	Stewart A. Dalie IV	<b>DEPTH TO WATER (First Encountered)</b>	5.8 ft (01-Nov-05)
<b>REVIEWED BY</b>	Ana Friel	<b>DEPTH TO WATER (Static)</b>	6.44 ft (22-Nov-05)
<b>REMARKS</b>	Air knifed to 10 fbg.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		S-5-5.0		5	SP		<b>CONCRETE SAND (SP)</b> ; dark brown (7.5YR 4/3); loose; moist; 10% clay, 90% fine sand.	0.6	<p>Portland Type I/II            Bentonite Seal            Monterey Sand #2/12            4"-diam., 0.020" Slotted Schedule 40 PVC</p> <p>Bottom of Boring @ 12 ft</p>
1.0 1.5				10			@ 11' - 100% fine sand.	12.0	

WELL LOG (PID) I:\ALAMEDA-1\GINTY\ALAMEDA.GPJ\_DEFAULT.GDT 1/26/06



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	S-6
<b>JOB/SITE NAME</b>	Shell-branded Service Station	<b>DRILLING STARTED</b>	31-Oct-05
<b>LOCATION</b>	1601 Webster Street, Alameda, California	<b>DRILLING COMPLETED</b>	28-Nov-05
<b>PROJECT NUMBER</b>	0467	<b>WELL DEVELOPMENT DATE (YIELD)</b>	19-Jan-06 (24 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	19.56 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	19.32 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	4 to 12 fbg
<b>LOGGED BY</b>	Stewart A. Dalie IV	<b>DEPTH TO WATER (First Encountered)</b>	6.8 ft (01-Nov-05)
<b>REVIEWED BY</b>	Ana Friel	<b>DEPTH TO WATER (Static)</b>	5.50 ft (19-Jan-06)
<b>REMARKS</b>	Air knifed to 5 fbg. Well S-6 initially installed on 11/1/05, found damaged. Replaced on 11/28/05.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				SC		<b>ASPHALT</b> <b>Clayey SAND (SC)</b> ; light brown (10YR 4/3); loose; moist; 15% clay. 85% fine to coarse sand.	0.4	<ul style="list-style-type: none"> <li>Portland Type I/II</li> <li>Bentonite Seal</li> <li>Monterey Sand #2/12</li> <li>4"-diam., 0.020" Slotted Schedule 40 PVC</li> <li>Bottom of Boring @ 12 ft</li> </ul>
				SP		<b>SAND (SP)</b> ; light brown (10YR 4/3); loose; moist; 10% clay, 90% fine sand.	1.5	
1.2		S-6-5.0	5			@ 8' - grayish brown (10YR 5/2); 100% fine sand; odor.		
0.8			10			@ 11' - dark gray (7.5YR 4/1); wet; 100% fine sand.	12.0	
31								

WELL LOG (PID) I:\ALAMEDA-1\GINT\ALAMEDA.GPJ DEFAULT.GDT 1/26/06





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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	S-7
<b>JOB/SITE NAME</b>	Shell-branded Service Station	<b>DRILLING STARTED</b>	31-Oct-05
<b>LOCATION</b>	1601 Webster Street, Alameda, California	<b>DRILLING COMPLETED</b>	01-Nov-05
<b>PROJECT NUMBER</b>	0467	<b>WELL DEVELOPMENT DATE (YIELD)</b>	14-Nov-05 (19 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	19.90 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	19.44 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	4 to 12 fbg
<b>LOGGED BY</b>	Stewart A. Dalie IV	<b>DEPTH TO WATER (First Encountered)</b>	7.0 ft (01-Nov-05)
<b>REVIEWED BY</b>	Ana Friel	<b>DEPTH TO WATER (Static)</b>	6.88 ft (22-Nov-05)
<b>REMARKS</b>	Air knifed to 5 fbg.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
20		S-7-5.0	5	SP		<b>ASPHALT SAND (SP)</b> ; greenish gray (5GY 5/1); loose; moist; 5% clay, 5% silt, 90% fine sand.	0.6	<p>           Portland Type I/II            Bentonite Seal            Monterey Sand #2/12            4"-diam., 0.020" Slotted Schedule 40 PVC            Bottom of Boring @ 12 ft         </p>
203								
94			10					
415							12.0	

WELL LOG (PID) I:\ALAMEDA-1\GINTY\ALAMEDA.GPJ\_DEFAULT.GDT 1/26/06

**Appendix D**

**Gregg In Situ, Inc.  
Cone Penetration Test Data**



# LQCPTV2

Application of the Integrated CPT Method for Estimating Cyclic Resistance Ratio and Estimating Liquefaction Induced Displacements

## CPT LIQUEFACTION POTENTIAL AND LIQUEFACTION INDUCED DEFORMATIONS ANALYSIS SPREADSHEET

**LQCPTV2** is a Microsoft Excel® executable spreadsheet that calculates the liquefaction potential for a site from Cone Penetration Test (CPT) data. It is based on *The Integrated CPT Method for Evaluating Liquefaction Potential* developed by Robertson and Wride at the University of Alberta. This method forms the basis for the recommendations by the 1996 NCEER (National Center for Earthquake Engineering) Workshop for use of the CPT in determining Cyclic Resistance Ratio. The spreadsheet also predicts liquefaction-induced soil deformations based on the methods developed by Zhang, Robertson and Brachman.

The **integrated CPT method** uses normalized CPT parameters (tip resistance and friction ratio) and an estimate of grain size characteristics to assess the liquefaction potential for a site. Deformations are calculated for one of three general site geometry options.

**LQCPTV2** is designed specifically for use with ConeTec / Gregg In-Situ formatted CPT data files and requires only the Watertable Depth, peak Earthquake Accelerations and Earthquake Magnitude. The routine allows for the analysis of 2 accelerations at the same time.

**LQCPTV2** provides instantaneous tabular and graphical output in separate worksheets. Hardcopy output can be made through any installed Windows printer.

# \$499 US

Payable by Visa Credit Card

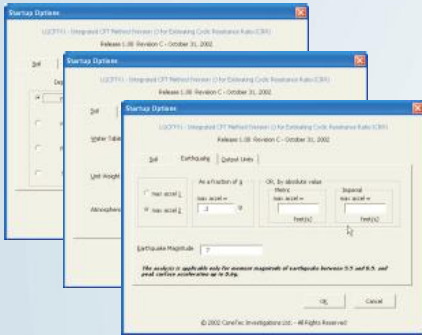
1-800-567-7969 • [software@conetec.com](mailto:software@conetec.com)



# CPT Liquefaction Analysis Spreadsheet

Application of the Integrated Method for Estimating Cyclic Resistance Ratio

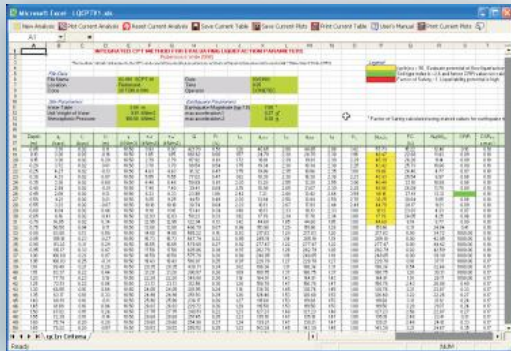
## INPUT PARAMETERS



The routine only requires the following information:

- ConeTec/Gregg In-Situ formatted CPT data file
- Soil / Stress Parameters
  - a) Depth to water table
  - b) Unit weight of water (default provided)
  - c) Atmospheric pressure (default provided)
- Earthquake Parameters
  - a) Peak acceleration (2 can be analyzed)
  - b) Earthquake magnitude
- Output Units, selected from list of options

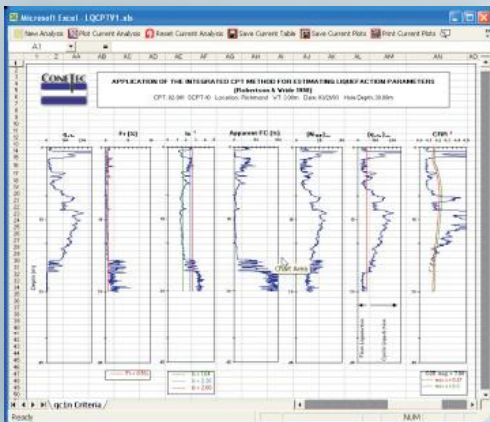
## TABULAR OUTPUT WORKSHEET



The tabular output provides columns of:

- Input data  $q_c$ ,  $f_s$  and  $u$
- Stress calculations,  $\gamma_s$ ,  $\sigma_v$  and  $\sigma_v'$
- Normalized parameters  $Q$ ,  $Fr$  and  $q_{c1n}$
- Soil behavior type index,  $I_c$ , and Apparent fines content,  $FC$
- Clean sand equivalent,  $(q_{c1n})_{cs}$
- Cyclic resistance ratio,  $CRR$
- Cyclic stress ratio,  $CSR$  (for each acceleration)
- Factor of safety,  $FS$

## GRAPHICAL OUTPUT WORKSHEET



The graphical output provides plots of:

- Normalized tip resistance  $q_{c1n}$  and Friction Ratio  $F_r$
- Soil behavior type index,  $I_c$
- Apparent Fines Content,  $FC$
- Clean sand equivalent SPT  $N$ , at 60% energy
- Clean sand equivalent,  $(q_{c1n})_{cs}$
- Cyclic resistance ratio,  $CRR$

In addition, the Cyclic Stress Ratio curves calculated from the user entered peak accelerations are shown on the  $CRR$  plot.

Lines representing key boundaries for  $I_c$ ,  $F_r$  and  $(q_{c1n})_{cs}$  are shown

The boundary between flow liquefaction and cyclic liquefaction is also identified

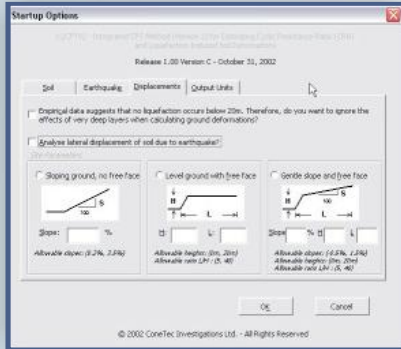




# CPT Liquefaction Analysis Spreadsheet

## Liquefaction Induced Displacements

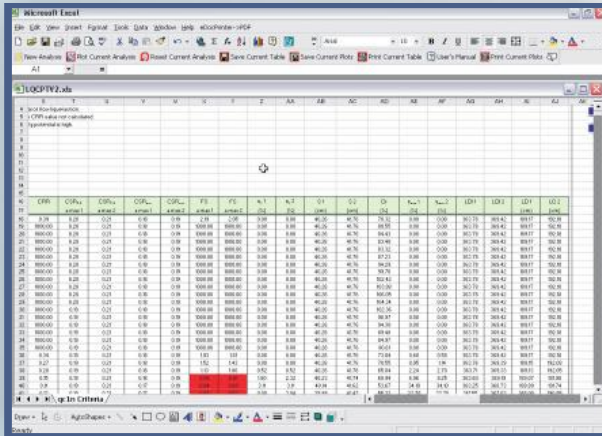
### INPUT PARAMETERS



To calculate deformations one of three basic site geometries can be specified:

- Gently sloping ground (enter slope as %)
- Level ground with an adjacent free face (enter height of free face and distance from toe of free face to borehole)
- Gently sloping ground and adjacent to a free face (enter slope, height of free face and distance from toe of free face to borehole)

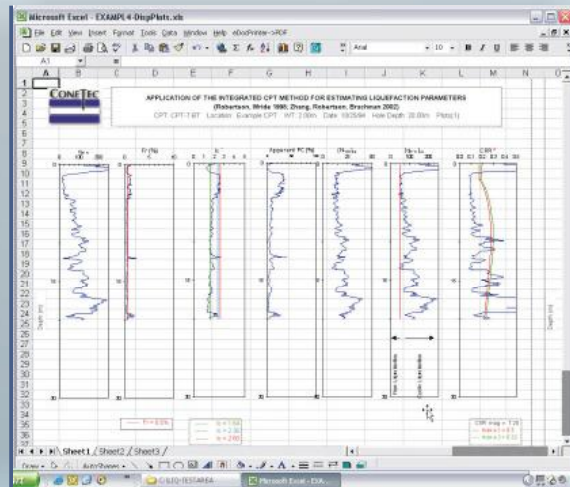
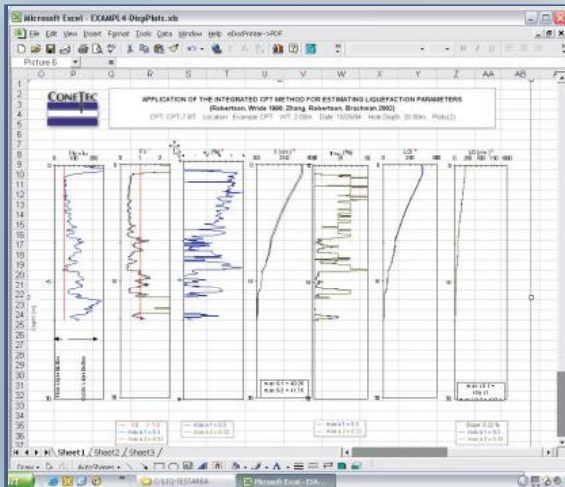
### TABULAR OUTPUT - DEFORMATIONS



### Program Limitations

- Moment Magnitudes between 5.5 and 8.5
  - Maximum surface acceleration of 0.6 g
- For Site Geometry case #3 (slope and free face)
- Moment Magnitudes between 6.4 and 7.9
  - Maximum surface acceleration between 0.2 g and 0.6 g

### GRAPHICAL OUTPUT - DEFORMATIONS AND LIQUEFACTION POTENTIAL



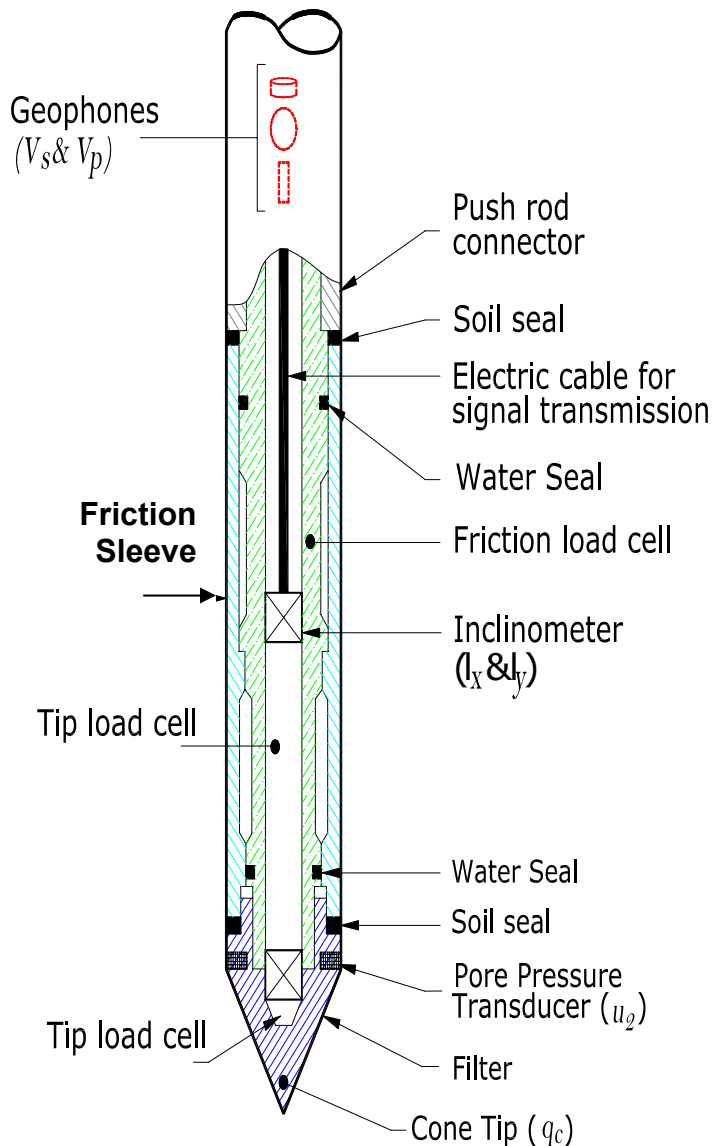


## Cone Penetration Testing Procedure (CPT)

Gregg In Situ, 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<sup>2</sup> and a friction sleeve area of 225 cm<sup>2</sup>. 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 dynamic 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 dynamic 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*

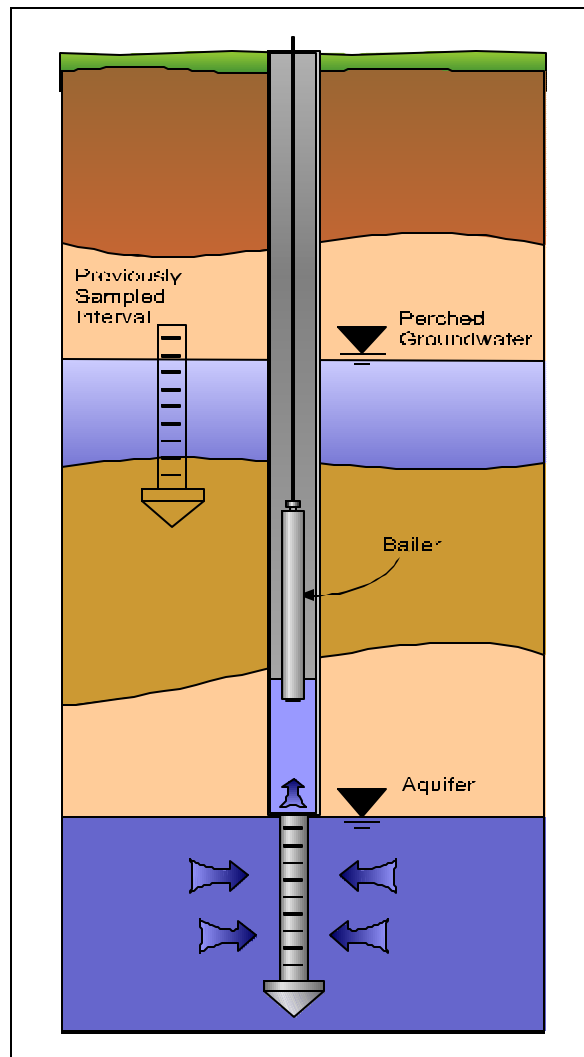
When the soundings are complete, the test holes are grouted using a Gregg In Situ support rig. The grouting procedure consists of pushing a hollow CPT rod with a “knock out” plug to the termination depth of the test hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole.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



## 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.



# Gregg In Situ

Environmental and Geotechnical Site Investigation Contractors

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## Gregg In Situ Interpretations as of June 30, 2004 (Release 1.22A)

Gregg In Situ's interpretation routine provides a tabular output of geotechnical parameters based on current published CPT correlations and is subject to change to reflect the current state of practice. The interpreted values are not considered valid for all soil types. The interpretations are presented only as a guide for geotechnical use and should be carefully scrutinized for consideration in any geotechnical design. Reference to current literature is strongly recommended. Gregg In Situ does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the program and does not assume liability for any use of the results in any design or review. Representative hand calculations should be made for any parameter that is critical for design purposes. The end user of the interpreted output should also be fully aware of the techniques and the limitations of any method used in this program. The purpose of this document is to inform the user as to which methods were used and what the appropriate papers and/or publications are for further reference.

The CPT interpretations are based on values of tip, sleeve friction and pore pressure averaged over a user specified interval (e.g. 0.20m). Note that  $q_t$  is the tip resistance corrected for pore pressure effects and  $q_c$  is the recorded tip resistance. Since all Gregg In Situ cones have equal end area friction sleeves, pore pressure corrections to sleeve friction,  $f_s$ , are not required.

The tip correction is:  $q_t = q_c + (1-a) \cdot u_2$

where:  $q_t$  is the corrected tip resistance

$q_c$  is the recorded tip resistance

$u_2$  is the recorded dynamic pore pressure behind the tip ( $u_2$  position)

$a$  is the Net Area Ratio for the cone (typically 0.85 for Gregg In Situ cones)

The total stress calculations are based on soil unit weights that have been assigned to the Soil Behavior Type zones, from a user defined unit weight profile or by using a single value throughout the profile. Effective vertical overburden stresses are calculated based on a hydrostatic distribution of equilibrium pore pressures below the water table or from a user defined equilibrium pore pressure profile (this can be obtained from CPT dissipation tests). For over water projects the effects of the column of water have been taken into account as has the appropriate unit weight of water. How this is done depends on where the instruments were zeroed (i.e. on deck or at mud line).

Details regarding the interpretation methods for all of the interpreted parameters are provided in Table 1. The appropriate references cited in Table 1 are listed in Table 2. Where methods are based on charts or techniques that are too complex to describe in this summary the user should refer to the cited material.

The estimated Soil Behavior Types (normalized and non-normalized) are based on the charts developed by Robertson and Campanella shown in Figures 1 and 2. The Bq classification charts are not reproduced in this document but can be reviewed in Lunne, Robertson and Powell (1997) or Robertson (1990).

Where the results of a calculation/interpretation are declared "invalid" the value will be represented by the text strings "-9999" or "-9999.0". In some cases the value 0 will be used. Invalid results will occur because of (and not limited to) one or a combination of:

1. Invalid or undefined CPT data (e.g. drilled out section or data gap).
2. Where the interpretation method is inappropriate, for example, drained parameters in an undrained material (and vice versa). The user must evaluate the site specific soil conditions and characteristics to properly apply the appropriate interpretation method.



3. Where interpretation input values are beyond the range of the referenced charts or specified limitations of the interpretation method.
4. Where pre-requisite or intermediate interpretation calculations are invalid.

The parameters selected for output from the program are often specific to a particular project. As such, not all of the interpreted parameters listed in Table 1 may be included in the output files delivered with this report.

The output files are in one format:

File Type	Typical Extensions	Description
Spreadsheet	XLS	IFI, NLI files exported directly to Excel format. Column and cell formatting has been done. Header information is exported to start in Column C allowing the depth columns A and/or B to be duplicated on each printed page without repetition of part of the header information.

**Table 1**  
**CPT Interpretation Methods**

Interpreted Parameter	Description	Equation	Ref
Depth	Mid Layer Depth <i>(where interpretations are done at each point then Mid Layer Depth = Recorded Depth)</i>	$Depth (Layer Top) + Depth (Layer Bottom) / 2.0$	
Elevation	Elevation of Mid Layer based on sounding collar elevation supplied by client	Elevation = Collar Elevation – Depth	
Avgqc	Averaged recorded tip value ( $q_c$ )	$Avgqc = \frac{1}{n} \sum_{i=1}^n q_c$ <i>n=1 when interpretations are done at each point</i>	
Avgqt	Averaged corrected tip ( $q_t$ ) where: $q_t = q_c + (1 - a) \cdot u$	$Avgqt = \frac{1}{n} \sum_{i=1}^n q_t$ <i>n=1 when interpretations are done at each point</i>	
Avgfs	Averaged sleeve friction ( $f_s$ )	$Avgfs = \frac{1}{n} \sum_{i=1}^n f_s$ <i>n=1 when interpretations are done at each point</i>	
AvgRf	Averaged friction ratio (Rf) where friction ratio is defined as: $Rf = 100\% \cdot \frac{f_s}{q_t}$	$AvgRf = 100\% \cdot \frac{Avgfs}{Avgqt}$ <i>n=1 when interpretations are done at each point</i>	
Avgu	Averaged dynamic pore pressure ( $u$ )	$Avgu = \frac{1}{n} \sum_{i=1}^n u_i$ <i>n=1 when interpretations are done at each point</i>	
AvgRes	Averaged Resistivity (this data is not always available since it is a specialized test requiring an additional module)	$Avgu = \frac{1}{n} \sum_{i=1}^n RESISTIVITY_i$ <i>n=1 when interpretations are done at each point</i>	
AvgUVIF	Averaged UVIF ultra-violet induced fluorescence (this data is not always available since it is a specialized test requiring an additional module)	$Avgu = \frac{1}{n} \sum_{i=1}^n UVIF_i$ <i>n=1 when interpretations are done at each point</i>	
AvgTemp	Averaged Temperature (this data is not always available since it is a specialized test)	$Avgu = \frac{1}{n} \sum_{i=1}^n TEMPERATURE_i$ <i>n=1 when interpretations are done at each point</i>	



Interpreted Parameter	Description	Equation	Ref
AvgGamma	Averaged Gamma Counts (this data is not always available since it is a specialized test requiring an additional module)	$Avg\gamma = \frac{1}{n} \sum_{i=1}^n GAMMA$ <i>n=1 when interpretations are done at each point</i>	
SBT	Soil Behavior Type as defined by Robertson and Campanella	See Figure 1	2, 5
SBTn	Normalized Soil Behavior Type as defined by Robertson and Campanella	See Figure 2	2, 5
SBT-BQ	Non-normalized soil behavior type based on the Bq parameter	See Figure 5.7 (reference 5)	2, 5
SBT-BQn	Normalized Soil Behavior base on the Bq parameter	See Figure 5.8 (reference 5) or Figure 3 (reference 2)	2, 5
k	Coefficient of permeability (assigned to each SBT zone)		5
U.Wt.	Unit Weight of soil determined from one of the following user selectable options: 1) uniform value 2) value assigned to each SBT zone 3) user supplied unit weight profile	See references	5
T. Stress $\sigma_v$	Total vertical overburden stress at Mid Layer Depth. <i>A layer is defined as the averaging interval specified by the user. For data interpreted at each point the Mid Layer Depth is the same as the recorded depth.</i>	$TStress = \sum_{i=1}^n g_i h_i$ where $g$ is layer unit weight $h_i$ is layer thickness	
Ueq	Equilibrium pore pressure determined from one of the following user selectable options: 1) hydrostatic from water table depth 2) user supplied profile	For hydrostatic option: $u_{eq} = \gamma_w \cdot (D - D_{wt})$ where $u_{eq}$ is equilibrium pore pressure $\gamma_w$ is unit weight of water $D$ is the current depth $D_{wt}$ is the depth to the water table	
E. Stress $\sigma_v$	Effective vertical overburden stress at Mid Layer Depth	$Estress = Tstress - u_{eq}$	
Cn	SPT $N_{60}$ overburden correction factor	$Cn = (s_v')^{-0.5}$ where $s_v'$ is in tsf $0.5 < Cn < 2.0$	
$N_{60}$	SPT N value at 60% energy calculated from qt/N ratios assigned to each SBT zone. This method has abrupt N value changes at zone boundaries.	See Figure 1	4, 5
$(N_1)_{60}$	SPT $N_{60}$ value corrected for overburden pressure	$(N_1)_{60} = Cn \cdot N_{60}$	4
$N_{60}lc$	SPT $N_{60}$ values based on the lc parameter	$(qt/psf) / N_{60} = 8.5 (1 - lc/4.6)$	5
$(N_1)_{60}lc$	SPT $N_{60}$ value corrected for overburden pressure (using $N_{60}lc$ ). User has 2 options.	1) $(N_1)_{60}lc = Cn \cdot (N_{60}lc)$ 2) $q_{c1n} / (N_1)_{60}lc = 8.5 (1 - lc/4.6)$	4 5
$(N_1)_{60cs}lc$	Clean sand equivalent SPT $(N_1)_{60}lc$ . User has 3 options.	1) $(N_1)_{60cs}lc = a + \beta((N_1)_{60}lc)$ 2) $(N_1)_{60cs}lc = K_{SPT} * ((N_1)_{60}lc)$ 3) $q_{c1ncs} / (N_1)_{60cs}lc = 8.5 (1 - lc/4.6)$  FC = 5%: $a = 0, \beta = 1.0$ FC = 35% $a = 5.0, \beta = 1.2$ 5% < FC < 35% $a = \exp[1.76 - (190/FC^2)]$ $\beta = [0.99 + (FC^{1.5}/1000)]$	10 10 5



Interpreted Parameter	Description	Equation	Ref
$Q_t$	Normalized $q_t$ for Soil Behavior Type classification as defined by Robertson, 1990	$Q_t = \frac{qt - \mathbf{S}_v}{\mathbf{s}_v}$	2, 5
$F_r$	Normalized Friction Ratio for Soil Behavior Type classification as defined by Robertson, 1990	$F_r = 100\% \cdot \frac{f_s}{qt - \mathbf{S}_v}$	2, 5
Bq	Pore pressure parameter	$Bq = \frac{\Delta u}{qt - \mathbf{S}_v}$ <i>where:</i> $\Delta u = u - u_{eq}$ <i>and</i> $u$ = dynamic pore pressure $u_{eq}$ = equilibrium pore pressure	1, 5
$I_c$	Soil index for estimating grain characteristics	$I_c = [(3.47 - \log_{10} Q)^2 + (\log_{10} Fr + 1.22)^2]^{0.5}$ <i>Where:</i> $Q = \left( \frac{qt - \mathbf{S}_v}{P_{a2}} \right) \left( \frac{P_a}{\mathbf{s}_v} \right)^n$ <i>And</i> $Fr$ is in percent $P_a$ = atmospheric pressure $P_{a2}$ = atmospheric pressure $n$ varies from 0.5 to 1.0 and is selected in an iterative manner based on the resulting $I_c$	3, 8
FC	Apparent fines content (%)	$FC = 1.75(I_c^{3.25}) - 3.7$ $FC = 100$ for $I_c > 3.5$ $FC = 0$ for $I_c < 1.26$ $FC = 5\%$ if $1.64 < I_c < 2.36$ AND $F_r < 0.5$	3
$I_c$ Zone	This parameter is the Soil Behavior Type zone based on the $I_c$ parameter (valid for zones 2 through 7 on SBTn chart)	$I_c < 1.31$ Zone = 7 $1.31 < I_c < 2.05$ Zone = 6 $2.05 < I_c < 2.60$ Zone = 5 $2.60 < I_c < 2.95$ Zone = 4 $2.95 < I_c < 3.60$ Zone = 3 $I_c > 3.60$ Zone = 2	3
$D_r$	Relative Density determined from one of the following user selectable options: a) Ticino Sand b) Hokksund Sand c) Schmertmann 1976 d) Jamiolkowski - All Sands	See reference	5
PHI $\phi$	Friction Angle determined from one of the following user selectable options: a) Campanella and Robertson b) Durgunoglu and Mitchel c) Janbu	See reference	5
State Parameter	The state parameter is used to describe whether a soil is contractive (SP is positive) or dilative (SP is negative) at large strains based on the work by Been and Jefferies	See reference	8, 6, 5
Es/qt	Intermediate parameter for calculating Youngs Modulus, E, in sands. It is the Y axis of the reference chart.	Based on Figure 5.59 in the reference	5



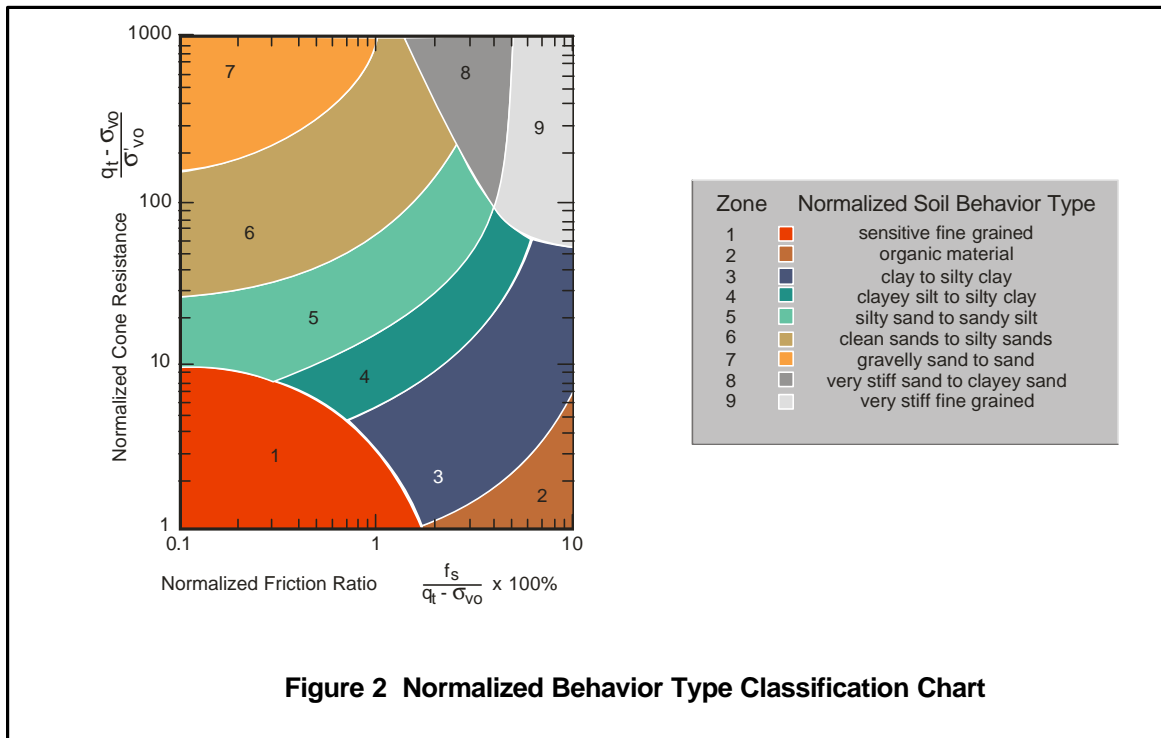
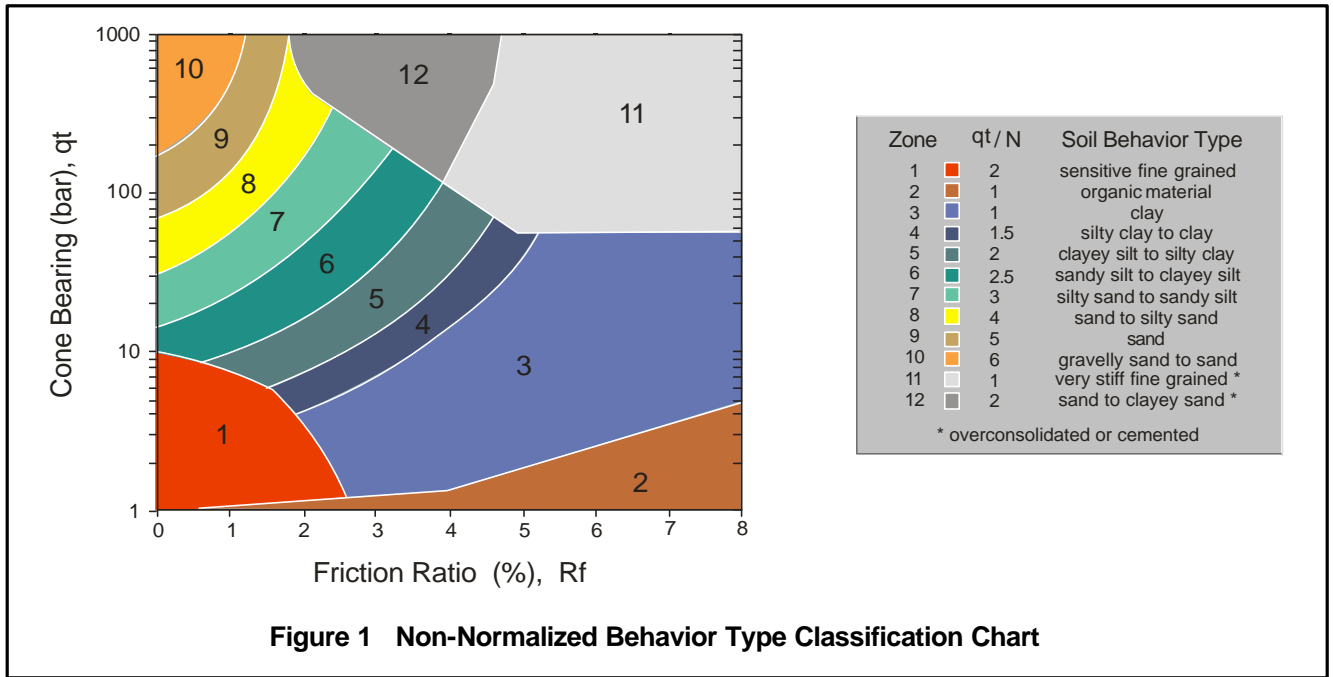
Interpreted Parameter	Description	Equation	Ref
Youngs Modulus E	<p>Youngs Modulus based on the work by Baldi. There are three types of sands considered in this technique. The user selects the appropriate type for the site from:</p> <p>a) OC Sands b) Aged NC Sands c) Recent NC Sands</p> <p>Each sand type has a family of curves that depend on mean normal stress. The program calculates mean normal stress and linearly interpolates between the two extremes provided in Baldi's chart.</p>	<p>Mean normal stress is evaluated from:</p> $s'_m = \frac{1}{3} \cdot (s'_v + s'_h + s'_h)$ <p>where <math>\sigma'_v</math> = vertical effective stress <math>\sigma'_h</math> = horizontal effective stress and <math>\sigma'_h = K_o \cdot \sigma'_v</math> with <math>K_o</math> assumed to be 0.5</p>	5
Su	Undrained shear strength - $N_{kt}$ is user selectable	$S_u = \frac{qt - S_v}{N_{kt}}$	1, 5
OCR	Over Consolidation Ratio	<p>a) Based on Schmertmann's method involving a plot of <math>S_u/\sigma'_v</math> / (<math>S_u/\sigma'_v</math>)<sub>NC</sub> and OCR</p> <p>where the <math>S_u/p'</math> ratio for NC clay is user selectable</p>	9



The following parameters are not presented but may be interpreted for use in liquefaction analysis. Further detailed interpretation may be completed by using the Liquefaction Spreadsheet following the committee recommendations of the NCEER. This Spreadsheet is available for purchase. A promotional document is presented in the Interpretations directory on the Data Disk with this report.

Interpreted Parameter	Description	Equation	Ref
$q_{c1}$	$q_t$ normalized for overburden stress used for seismic analysis	$q_{c1} = q_t \cdot (Pa/\sigma_v')^{0.5}$ where: Pa = atm. Pressure $q_t$ is in Mpa	3
$q_{c1n}$	$q_{c1}$ in dimensionless form used for seismic analysis	$q_{c1n} = (q_{c1} / Pa)(Pa/\sigma_v')$ where: Pa = atm. Pressure and n ranges from 0.5 to 0.75 based on $I_c$ .	3
$K_{SPT}$	Equivalent clean sand factor for $(N_1)_{60}$	$K_{SPT} = 1 + ((0.75/30) * (FC - 5))$	10
$K_{CPT}$	Equivalent clean sand correction for $q_{c1n}$	$K_{cpt} = 1.0$ for $I_c \leq 1.64$ $K_{cpt} = f(I_c)$ for $I_c > 1.64$ (see reference)	10
$q_{c1ncs}$	Clean sand equivalent $q_{c1n}$	$q_{c1ncs} = q_{c1n} \cdot K_{cpt}$	3
CRR	Cyclic Resistance Ratio (for Magnitude 7.5)	$q_{c1ncs} < 50$ : $CRR_{7.5} = 0.833 [(q_{c1ncs}/1000) + 0.05]$  $50 \leq q_{c1ncs} < 160$ : $CRR_{7.5} = 93 [(q_{c1ncs}/1000)^3 + 0.08]$	10
CSR	Cyclic Stress Ratio	$CSR = (\tau_{av}/\sigma_v') = 0.65 (a_{max}/g) (\sigma_v'/\sigma_v') r_d$  $r_d = 1.0 - 0.00765 z$ $z \leq 9.15m$ $r_d = 1.174 - 0.0267 z$ $9.15 < z \leq 23m$ $r_d = 0.744 - 0.008 z$ $23 < z \leq 30m$ $r_d = 0.50$ $z > 30m$	10
MSF	Magnitude Scaling Factor	See Reference	10
FoS	Factor of Safety against Liquefaction	$FS = (CRR_{7.5} / CSR) MSF$	10
Liquefaction Status	Statement indicating possible liquefaction	Takes into account FofS and limitations based $I_c$ and $q_{c1ncs}$ .	10





**Table 2 References**

No.	References
1	Robertson, P.K., Campanella, R.G., Gillespie, D. and Greig, J., 1986, "Use of Piezometer Cone Data", Proceedings of InSitu 86, ASCE Specialty Conference, Blacksburg, Virginia.
2	Robertson, P.K., 1990, "Soil Classification Using the Cone Penetration Test", Canadian Geotechnical Journal, Volume 27.
3	Robertson, P.K. and Fear, C.E., 1998, "Evaluating cyclic liquefaction potential using the cone penetration test", Canadian Geotechnical Journal, 35: 442-459.
4	Robertson, P.K. and Wride, C.E., 1998, "Cyclic Liquefaction and its Evaluation Based on SPT and CPT", NCEER Workshop Paper, January 22, 1997
5	Lunne, T., Robertson, P.K. and Powell, J. J. M., 1997, "Cone Penetration Testing in Geotechnical Practice," Blackie Academic and Professional.
6	Plewes, H.D., Davies, M.P. and Jefferies, M.G., 1992, "CPT Based Screening Procedure for Evaluating Liquefaction Susceptibility", 45th Canadian Geotechnical Conference, Toronto, Ontario, October 1992.
7	Jefferies, M.G. and Davies, M.P., 1993. "Use of CPTu to Estimate equivalent $N_{60}$ ", Geotechnical Testing Journal, 16(4): 458-467.
8	Been, K. and Jefferies, M.P., 1985, "A state parameter for sands", Geotechnique, 35(2), 99-112.
9	Schmertmann, 1977, "Guidelines for Cone Penetration Test Performance and Design", Federal Highway Administration Report FHWA-TS-78-209, U.S. Department of Transportation
10	Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils, Salt Lake City, 1996. Chaired by Leslie Youd.





# 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 ( $u_2$ )

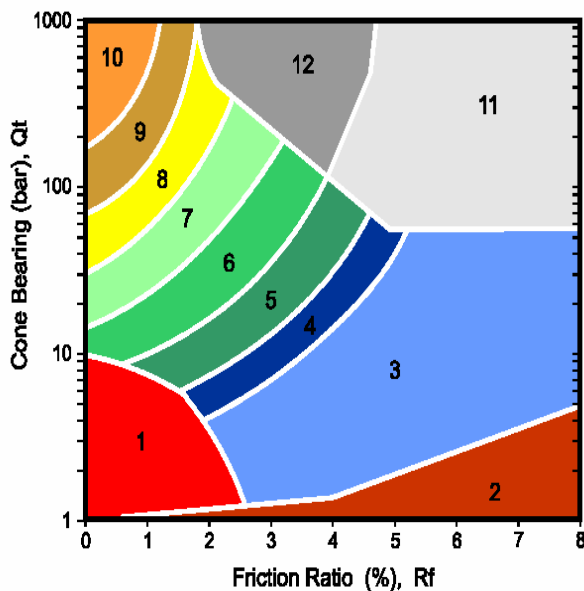
Cohesionless soils (sands)

- 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	Gravelly sand to sand
11	1	Very stiff fine grained*
12	2	Sand to clayey sand*

\*over consolidated or cemented

Figure SBT



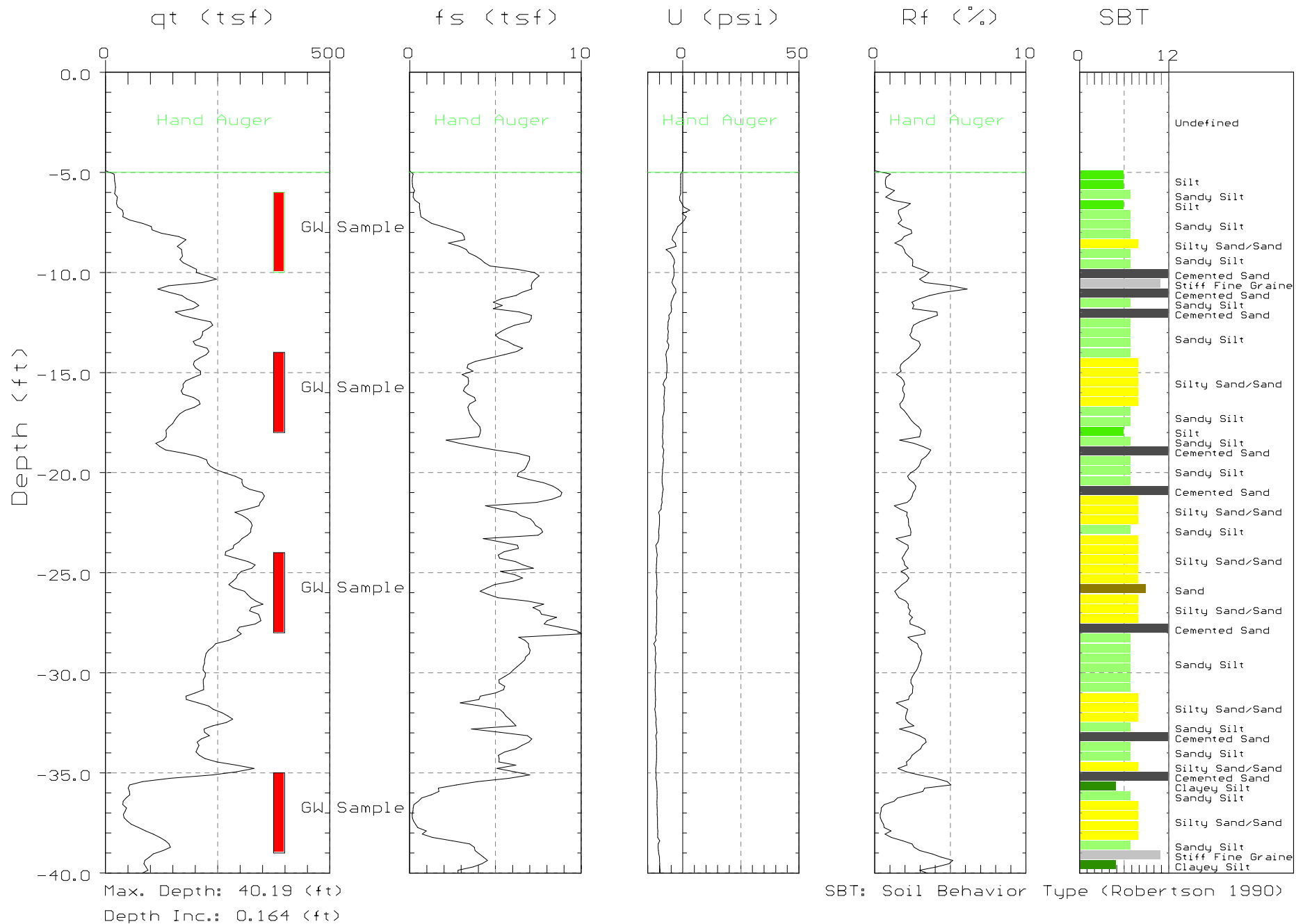




# CAMBRIA

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Location: CPT-SB10

Engineer: S. DALIEY  
Date: 11:02:05 16:24

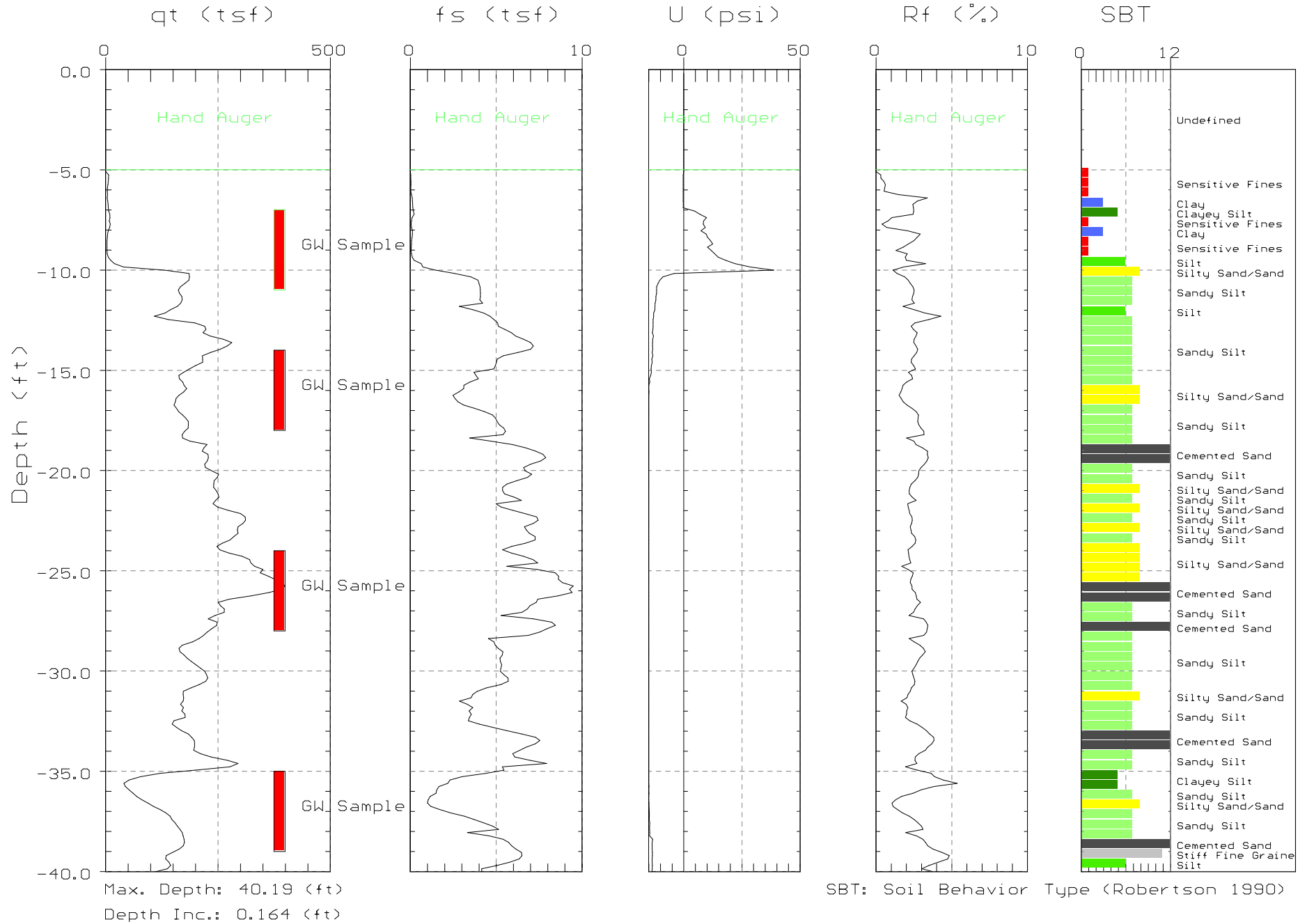




# CAMBRIA

Site: 1601 WEBSTER ST.  
Location: CPT-SB11

Engineer: S. DALIEY  
Date: 11:03:05 14:22

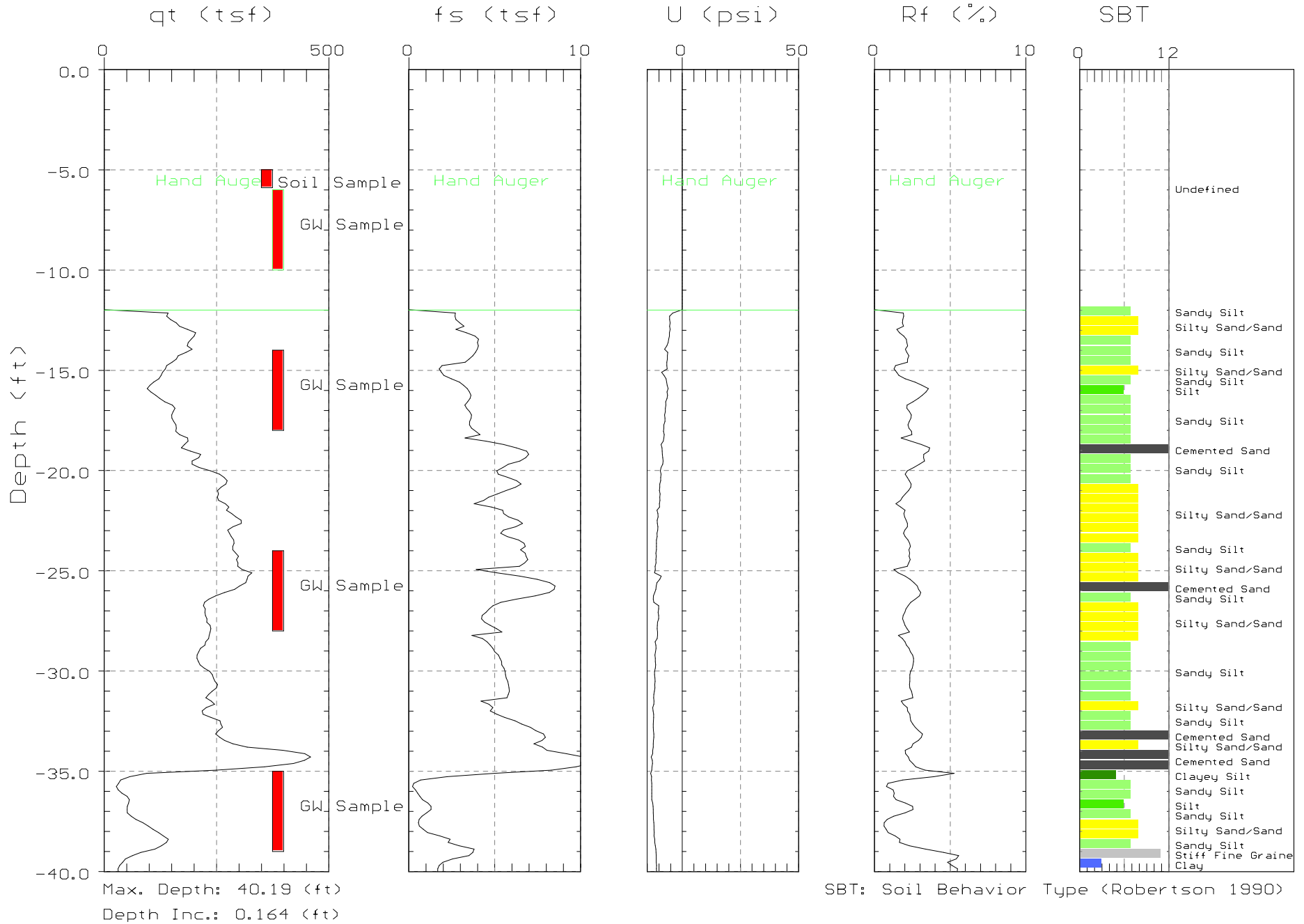




# CAMBRIA

Site: 1601 WEBSTER ST.  
Location: CPT-SB12

Engineer: S.DALIEY  
Date: 11:02:05 13:59



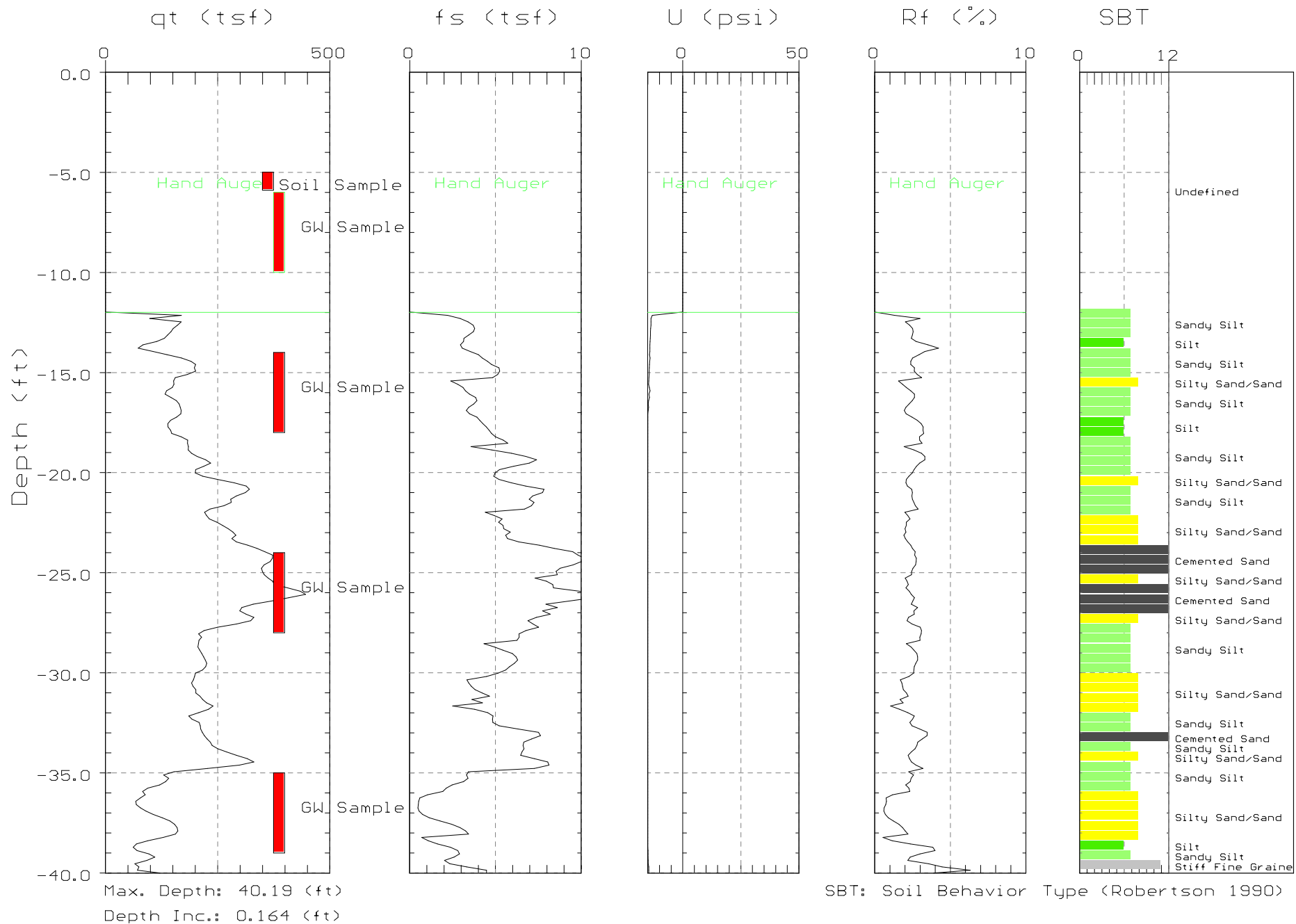




# CAMBRIA

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Location: CPT-SB14

Engineer: S. DALIEY  
Date: 11:03:05 09:49

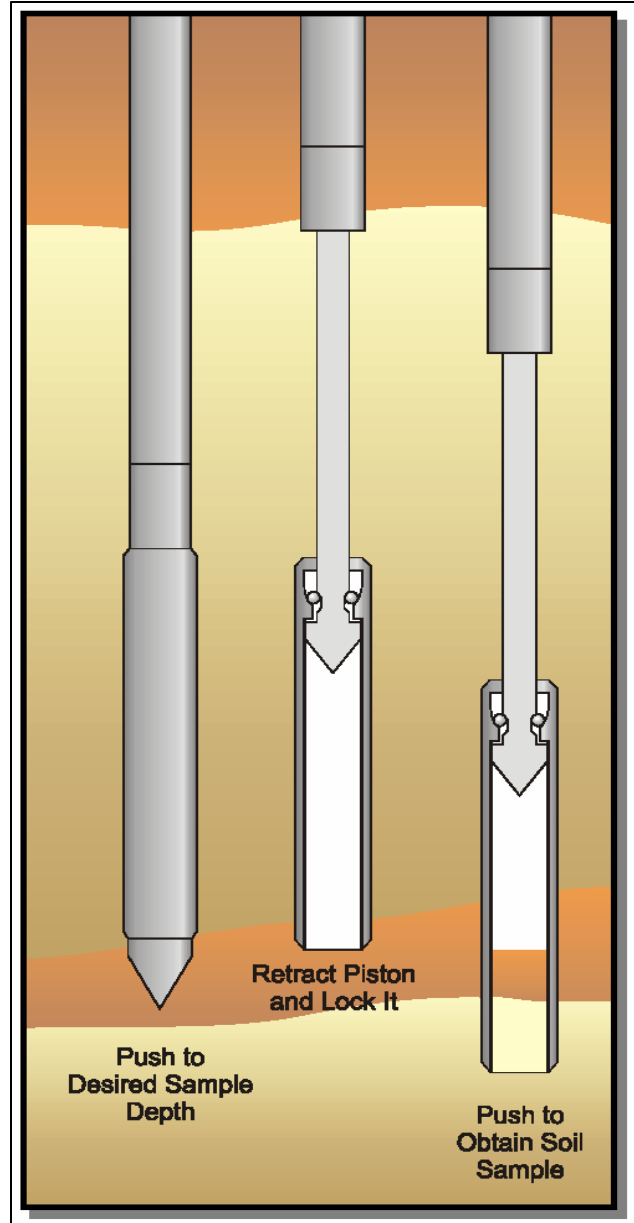




## Soil Sampling (SS)

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.

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



*Figure SS*

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



# 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.

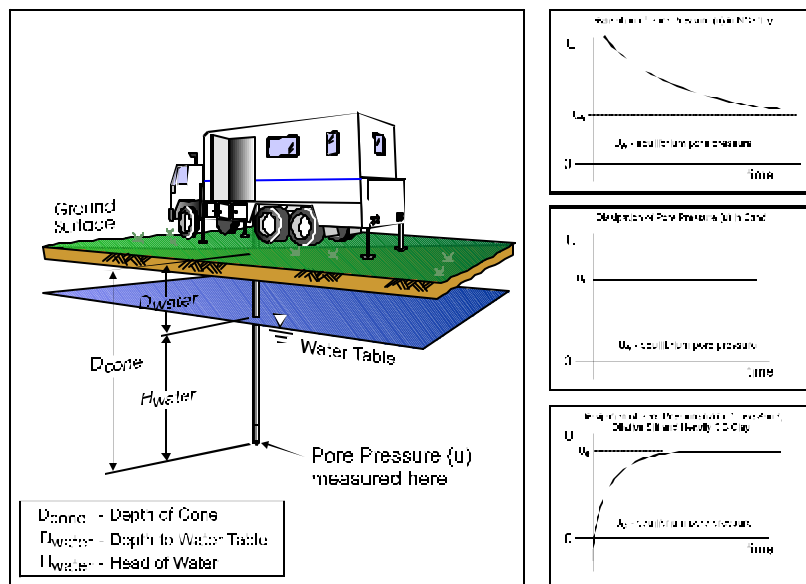
Pore pressure dissipation data can be interpreted to provide estimates of:

- 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. 1991.

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:

$$D_{\text{water}} = D_{\text{co}}$$

where  $H_{\text{water}} = U_e$  (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



# GREGG IN SITU

## Digital File Formats

### **CPT Data Files**

Unless otherwise requested by the client, Gregg CPT data files are named such that the first 3 characters contain Gregg In-Situ, Inc. job number, the next character is typically C for CPT (S if shear waves were collected, R if Resistivity was used, U for UVIF or M for 'Mini-Cone') followed by two or three characters indicating the sounding number. The last character position is reserved for the letters a, b, c, d etc to uniquely identify multiple soundings at the same location. The CPT sounding file has the extension COR and pore pressure dissipation files have the extension PPD. As an example, for job number 05-127 (Job Number 127 in the year 2005) the first sounding will have file names 127C01.COR and 127C01.PPC.

The CPT (COR) file consists of the following components:

1. Two lines of header information
2. Data records
3. End of data marker
4. Units information

#### **Header Lines**

Line 1: Columns 1-6 are blank (future use)  
Columns 7-21 contain the sounding Date and Time  
Columns 22-36 contain the sounding Operator  
Line 2: Columns 1-16 contain the sounding ID  
Columns 17-31 Field representative  
Columns 32-47 contain the project name

#### **Data Records**

The data records contain 4 or more columns of data in floating point format. A comma (and spaces) separates each data item:

Column 1: Sounding Depth (m)

Column 2: Tip ( $q_c$ ) data uncorrected for pore pressure effects. Recorded in units selected by the CPT operator.

Column 3: Sleeve ( $f_s$ ) data. Recorded in units selected by the operator

Column 4: Dynamic pore pressure readings ( $u_2$ ). Recorded in units selected by the operator

Column 5: Exists only if specialty modules (Resistivity and/or UVIF) have been used

#### **End of Data Marker**

After the last line of data a line containing ASCII 26 (CTL-Z) and a new line (carriage return/ line feed) character. This is used to mark the end of data.

#### **Units Information**

The last section of the file contains information about the units that were selected for the sounding. A separator bar makes up the first line. The second line contains the type of units used for depth,  $q_c$ ,  $f_s$  and  $u_2$ . The third line contains the conversion values required for Gregg's software to convert the recorded data to an internal set of base units (bar for  $q_c$ , bar for  $f_s$  and meters for  $u_2$ ).



## **CPT Dissipation Files**

CPT Dissipation files have the same naming convention as the CPT sounding files and have the extension PPC. PPC files consist of the following components:

1. Two lines of header information
2. Data records

### **Header Lines (same as COR file):**

Line 1: Columns 1-6 are blank (future use)  
Columns 7-21 contain the sounding Date and Time  
Columns 22-36 contain the sounding Operator  
Line 2: Columns 1-16 Sounding or Location ID  
Columns 17-31 Field Representative  
Columns 32-47 Project Name

### **Data Records**

The data records immediately follow the header lines. Each data record can occupy several lines in the file and is a complete record of a dissipation test at a particular depth. Each data record starts with a line containing two values separated by spaces; the first value being an index number and the second being the dissipation test depth in meters. Following this line are the dissipation pore pressure values stored at 5 second intervals with a maximum of 12 entries per line. The last line of the dissipation record may not contain a full 12 entries. The data record is terminated with an ASCII 30 character (appears as a triangle in some editors). This sequence is repeated for every dissipation test in the sounding. No marker is used to indicate end of file. Unit information is not stored in this file. Users would have to check the CPT file for the units that were used.



**Appendix E**  
**Disposal Documentation**



NOV 29 2005

**Hazardous Waste Hauler (Registration # 2843)**

**P.O. Box 292547 \* Sacramento, CA 95829 \* FAX 916-381-1573**

**Disposal Confirmation**

Request for Transportation Received: 11/15/2005

**Consultant Information**

Company: Cambria  
Contact: Stu  
Phone: 510-420-3339  
Fax: 510-420-9170

**Site Information**

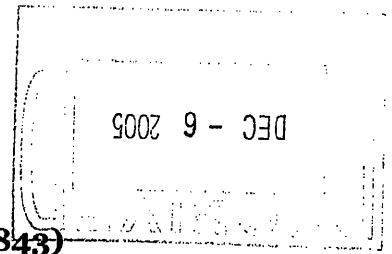
PO # \_\_\_\_\_  
Street Address: 1601 Webster St.  
City, State, ZIP: Alameda, Ca

Customer: Shell Oil Company RESA-0023-LDC  
RIPR #: 49141  
SAP # / Location: 135032  
Incident #: 97564701  
Location / WIC #: 204-0072-0403  
Environmental Engineer: Denis Brown

Material Description: Soil  
Estimated Quantity: 2 cy  
Service Requested Date: ASAP!!

Disposal Facility: Forward Landfill  
Contact: Scott  
Phone: 800 204-4242  
Approval #: 5965  
Date of Disposal: 11/19/2005  
Actual Tonnage: 3.42 tons

Transporter: Manley & Sons Trucking, Inc.  
Contact: Jennifer Rogers  
Phone: 916 381-6864  
Fax: 916 381-1573  
Invoice: 200511-20  
Date of Invoice: 11/22/2005



**Hazardous Waste Hauler (Registration # 2843)**

P.O. Box 292547 \* Sacramento, CA 95829 \* FAX 916-381-1573

**Disposal Confirmation**

Request for Transportation Received: 11/29/2005

**Consultant Information**

Company: Cambria  
 Contact: Stu  
 Phone: 510-420-3339  
 Fax: 510-420-9170

**Site Information**

PO # \_\_\_\_\_  
 Street Address: 1601 Webster Street  
 City, State, ZIP: Alameda, Ca

Customer: Shell Oil Company RESA-0023-LDC  
 RIPR #: 49723  
 SAP # / Location: 135032  
 Incident #: 97564701  
 Location / WIC #: 204-0072-0403  
 Environmental Engineer: Denis Brown

Material Description: Soil  
 Estimated Quantity: < 1/4 CY  
 Service Requested Date: ASAP!!

Disposal Facility: Forward Landfill  
 Contact: Scott  
 Phone: 800 204-4242  
 Approval #: 5965  
 Date of Disposal: 11/30/2005  
 Actual Tonnage: .15 tons

Transporter: Manley & Sons Trucking, Inc.  
 Contact: Jennifer Rogers  
 Phone: 916 381-6864  
 Fax: 916 381-1573  
 Invoice: 200511-30  
 Date of Invoice: 12/02/2005

**Cambria Environmental Sonoma**

November 11, 2005

270 Perkins Street  
Sonoma, CA 95476

Attn.: Dennis Baertschi

Project#: 247-0467

Project: 97564701

Site: 1601 Webster Street, Alameda, CA

Attached is our report for your samples received on 11/07/2005 14:15

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/22/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: [mbrewer@stl-inc.com](mailto:mbrewer@stl-inc.com)

Sincerely,



Melissa Brewer  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467  
97564701

Received: 11/07/2005 14:15

Site: 1601 Webster Street, Alameda, CA

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SP-1	11/01/2005 13:00	Soil	1

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467  
97564701

Received: 11/07/2005 14:15

Site: 1601 Webster Street, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SP-1	Lab ID:	2005-11-0129 - 1
Sampled:	11/01/2005 13:00	Extracted:	11/9/2005 11:04
Matrix:	Soil	QC Batch#:	2005/11/09-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/09/2005 11:04	
Benzene	ND	0.0050	mg/Kg	1.00	11/09/2005 11:04	
Toluene	ND	0.0050	mg/Kg	1.00	11/09/2005 11:04	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/09/2005 11:04	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/09/2005 11:04	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	110.0	76-124	%	1.00	11/09/2005 11:04	
Toluene-d8	92.1	75-116	%	1.00	11/09/2005 11:04	



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467  
97564701

Received: 11/07/2005 14:15

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Soil**

**QC Batch # 2005/11/09-1A.69**

MB: 2005/11/09-1A.69-034

Date Extracted: 11/09/2005 07:34

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/09/2005 07:34	
Benzene	ND	0.0050	mg/Kg	11/09/2005 07:34	
Toluene	ND	0.0050	mg/Kg	11/09/2005 07:34	
Ethyl benzene	ND	0.0050	mg/Kg	11/09/2005 07:34	
Total xylenes	ND	0.0050	mg/Kg	11/09/2005 07:34	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	104.6	76-124	%	11/09/2005 07:34	
Toluene-d8	96.6	75-116	%	11/09/2005 07:34	

Severn Trent Laboratories, Inc.

11/10/2005 19:08

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467  
97564701

Received: 11/07/2005 14:15

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2005/11/09-1A.69**

LCS 2005/11/09-1A.69-052

Extracted: 11/09/2005

Analyzed: 11/09/2005 06:52

LCSD 2005/11/09-1A.69-013

Extracted: 11/09/2005

Analyzed: 11/09/2005 07:13

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	0.0502	0.0525	0.05	100.4	105.0	4.5	69-129	20		
Toluene	0.0522	0.0510	0.05	104.4	102.0	2.3	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	489	490	500	97.8	98.0		76-124			
Toluene-d8	480	479	500	96.0	95.8		75-116			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

11/10/2005 19:08

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street

Sonoma, CA 95476

Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467

97564701

Received: 11/07/2005 14:15

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Soil**

**QC Batch # 2005/11/09-1A.69**

MS/MSD

Lab ID: 2005-11-0135 - 003

MS: 2005/11/09-1A.69-022

Extracted: 11/09/2005

Analyzed: 11/09/2005 10:22

Dilution: 1.00

MSD: 2005/11/09-1A.69-043

Extracted: 11/09/2005

Analyzed: 11/09/2005 10:43

Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	0.0396	0.0428	ND	0.049800	79.5	85.9	7.7	69-129	20		
Toluene	0.0429	0.0449	ND	0.049800	86.1	90.2	4.7	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	464	487		500	92.8	97.4		76-124			
Toluene-d8	494	498		500	98.8	99.6		75-116			

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

11/10/2005 19:08

**Total Lead**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467  
97564701

Received: 11/07/2005 14:15

Site: 1601 Webster Street, Alameda, CA

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SP-1	11/01/2005 13:00	Soil	1

**Total Lead**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467  
97564701

Received: 11/07/2005 14:15

Site: 1601 Webster Street, Alameda, CA

Prep(s): 3050B	Test(s): 6010B
Sample ID: <b>SP-1</b>	Lab ID: 2005-11-0129 - 1
Sampled: 11/01/2005 13:00	Extracted: 11/10/2005 12:57
Matrix: Soil	QC Batch#: 2005/11/10-01.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	12	1.0	mg/Kg	1.00	11/10/2005 21:23	

**Total Lead**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467  
97564701

Received: 11/07/2005 14:15

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 3050B

Test(s): 6010B

Method Blank

Soil

QC Batch # 2005/11/10-01.15

MB: 2005/11/10-01.15-040

Date Extracted: 11/10/2005 12:57

Compound	Conc.	RL	Unit	Analyzed	Flag
Lead	ND	1.0	mg/Kg	11/10/2005 20:43	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

11/11/2005 12:17

**Total Lead**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467  
97564701

Received: 11/07/2005 14:15

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 3050B

Test(s): 6010B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2005/11/10-01.15**

LCS 2005/11/10-01.15-041

Extracted: 11/10/2005

Analyzed: 11/10/2005 20:53

LCSD 2005/11/10-01.15-042

Extracted: 11/10/2005

Analyzed: 11/10/2005 20:56

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Lead	98.2	101	100.0	98.2	101.0	2.8	80-120	20		

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

11/11/2005 12:17

Shell Project Manager to be invoiced  
 SCIENCE & ENGINEERING  
 TECHNICAL SERVICES  
 CRMT. HOUSTON

Denis Brown

INCIDENT NUMBER (S&E ONLY)  
 9 7 5 6 4 7 0 1  
 SAP or CRMT NUMBER (TS/CRMT)  
 1 3 5 0 3 2

DATE: 11/1/05  
 Page 1 of 2

SAMPLING COMPANY: Cambria Environmental  
 ADDRESS: Perkins Street, Sonoma CA  
 PROJECT CONTACT (Hardcopy or PDF Report to): Denis Baertchi / Stu Dalie  
 TELEPHONE: 707-268-3813 FAX: 707-268-8180  
 LOG CODE: CETS  
 SITE ADDRESS (Street and City): 1601 Webster Street, Alameda, CA  
 GLOBAL ID NO.: T0600137103  
 EDI DELIVERABLE TO (Responsible Party or Designee): shellsonomaedf@cambria-env.com  
 PHONE NO.: 707-933-2370  
 E-MAIL: dbaertchi@cambria-env.com  
 CONSULTANT PROJECT NO.: 247-0467  
 SAMPLER NAME(S) (Print): Stu Dalie

TURNAROUND TIME (BUSINESS DAYS):  
 10 DA  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS  
 LA - RWQCB REPORT FORM  UST AGENCY:  
 GC/MS MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_  
 SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED   
 please cc lab results to dbaertchi@cambria-env.com and sdalie@cambria-env.com  
 1 ypt comp for Disposal

REQUESTED ANALYSIS					FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
TPHg (EPA Method 8260)	BTEX (EPA Method 8260)	TBA (EPA Method 8260)	MTBE (8260B - 0.5ppb RL)	5 oxygenates	
					On ICE: Field point ID TEMPERATURE ON RECEIPT C° 2 3 5 SP-10

Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.
	DATE	TIME		
SP-1A	11/5/05	1000	Soil	1
SP-1B	↓	↓	↓	1
SP-1C	↓	↓	↓	1
SP-1D	↓	↓	↓	1

Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature] Date: 11.15 Time: 2pm  
 Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature] Date: 11/7/5 Time: 10:30am

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

Relinquished by [Signature] 11/7/05 1900



This information is business proprietary and confidential and must not be divulged or shared outside the company. The use of this information is strictly for the purpose of doing business with the Centralized Residual Management Team (CRMT). Upon termination of the relationship with the CRMT, this information is not to be forwarded, duplicated, shared or used for any purpose other than for the documentation of past actions.

**RESIDUAL MANAGEMENT PROCEDURE**

ISSUED DATE: 08/01/01  
CANCELS ISSUE:  
ISSUED BY: LRR

**RESIDUAL STREAM:** SOIL WITH UNLEADED GASOLINE  
**VENDOR:** ALLIED-BEJ  
**LOCATION:** ALLIED WASTE - MANTECA  
9999 SOUTH AUSTIN ROAD  
MANTECA, CA 95336

*(Handwritten signature)*

CALIFORNIA - TRANSPORTATION AND RETAIL

BTEX - EPA 8021B/8260B (IF BENZENE IS > OR = TO 10 MG/KG THEN TCLP BENZENE IS REQUIRED)

CAM METALS = TTLC METALS - *lead only*

STLC ON ALL TTLC METALS 10 TIMES STLC MAXIMUM

TTLC LEAD => 13 MG/KG REQUIRES ORGANIC LEAD ANALYSIS

IF ANY TTLC TOTAL METAL IS > OR = TO 20 TIMES TCLP REGULATORY LEVELS, TCLP IS REQUIRED

TOTAL PETROLEUM HYDROCARBONS, METHOD 418.1 OR 8015

*(Handwritten circled text: GASOLINE AND DIESEL)*

~~MTBE METHOD 8260B (GC/MS)~~

AQUATIC BIOASSAY (FISH TOX) IS ONLY TO BE RUN ON SAMPLES > OR = TO 5000 PPM TPH. AQUATIC BIOASSAY (FISH TOX) = PART 800 OF STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER (15TH EDITION)

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)

-ALTERNATE APPROVED TEST METHODS PER SW846 ARE ALSO ACCEPTABLE

-ALL REQUIRED TESTS ON COMPOSITE (*max 4:1*)

-LABORATORY IS TO SUPPLY QA/QC INFORMATION WITH ALL ANALYTICAL REPORTS

~~MAIL OR FAX ALL ANALYSIS TO THE CENTRALIZED RESIDUAL MANAGEMENT TEAM~~

PROCEDURE ORIGINAL DATE: 08/01/01  
PROCEDURE REVISED DATE: 08/01/01

## **Appendix F**

### **Blaine Tech Services, Inc. – Well Development and Groundwater Monitoring Data**



GROUNDWATER SAMPLING SPECIALISTS  
SINCE 1985

December 16, 2005

Denis Brown  
Shell Oil Products US  
20945 South Wilmington Avenue  
Carson, CA 90810

Fourth Quarter 2005 Groundwater Monitoring at  
Shell-branded Service Station  
1601 Webster Street  
Alameda, CA

Monitoring performed on September 15, October 17, and  
November 14 and 22, 2005

---

Groundwater Monitoring Report **051122-SS-1**

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

Mike Ninokata  
Project Coordinator

MN/ks

attachments: Cumulative Table of WELL CONCENTRATIONS  
Certified Analytical Report  
Field Data Sheets

cc: Ana Friel  
Cambria Environmental Technology, Inc.  
P.O. Box 259  
Sonoma, CA 95476-0259

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**1601 Webster Street**  
**Alameda, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
S-2	11/14/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.73	7.60	12.13
S-2	11/22/2005	996	0.630	0.500	0.500	3.10	406	<0.500	<0.500	0.570	18.0	NA	NA	NA	19.73	7.70	12.03
S-3	11/14/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.14	7.01	12.13
S-3	11/22/2005	3,900	<0.500	<0.500	<0.500	0.900	3,730	<0.500	<0.500	3.44	26.0	NA	NA	NA	19.14	7.15	11.99
S-4	11/14/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.16	6.00	12.16
S-4	11/22/2005	4,570	<0.500	<0.500	<0.500	0.660	3,450	<0.500	<0.500	3.57	26.0	NA	NA	NA	18.16	6.10	12.06
S-5	11/14/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.68	6.33	12.35
S-5	11/22/2005	1,010	0.900	<0.500	1.79	4.91	302	<0.500	<0.500	<0.500	397	NA	NA	NA	18.68	6.44	12.24
S-6	11/14/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.32	6.36	12.96
S-6	11/22/2005	15,800	5.14	0.690	32.1	934	<0.500	<0.500	<0.500	<0.500	14.2	NA	NA	NA	19.32	6.53	12.79
S-7	11/14/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.44	6.76	12.68
S-7	11/22/2005	51,100	2,680	2,980	969	6,360	1.49	<0.500	<0.500	<0.500	53.3	NA	NA	NA	19.44	6.88	12.56
TBW-E	11/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.31	NA
TBW-E	12/01/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.01	NA
TBW-E	12/07/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.32	NA
TBW-E	12/15/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.55	NA
TBW-E	12/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.95	NA
TBW-E	12/27/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.47	NA
TBW-N	11/23/2004	83,000	640	27,000	1,700	20,000	2,300	<400	<400	<400	1,300	<100	<100	<10,000	NA	5.64	NA
TBW-N	12/01/2004	160,000	700	31,000	2,300	24,000	2,900	<400	<400	<400	1,200	<100	<100	<10,000	NA	6.35	NA
TBW-N	12/07/2004	130,000	590	29,000	2,300	24,000	2,700	<400	<400	<400	1,300	<100	<100	<10,000	NA	5.65	NA

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**1601 Webster Street**  
**Alameda, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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TBW-N	12/15/2004	120,000	420	26,000	2,000	22,000	3,300	<400	<400	<400	<1,000	<100	<100	<10,000	NA	5.85	NA
TBW-N	12/23/2004	100,000	220	23,000	1,900	20,000	1,900	<400	<400	<400	<1,000	<100	<100	<10,000	NA	5.30	NA
TBW-N	12/27/2004	110,000	470	26,000	2,300	22,000	1,800	<400	<400	<400	<1,000	<100	<100	<10,000	NA	7.80	NA
TBW-N	01/17/2005	86,000	330	22,000	2,200	21,000	1,600	<400	<400	<400	1,600	<100	<100	<10,000	NA	6.59	NA
TBW-N	02/04/2005	97,000	290	23,000	1,800	20,000	1,900	<400	<400	<400	<1,000	<100	<100	<10,000	NA	4.50	NA
TBW-N	03/02/2005	94,000	360	24,000	2,000	19,000	1,200	<400	<400	<400	<1,000	<100	<100	<10,000	NA	4.11	NA
TBW-N	04/12/2005	27,000	130	9,300	1,100	8,700	1,400	<100	<100	<20	390	<25	<25	<2,500	NA	4.08	NA
TBW-N	05/13/2005	42,000	130	8,700	1,500	12,000	1,400	<100	<100	<100	440	<25	<25	<2,500	NA	4.45	NA
TBW-N	06/10/2005	46,000	63	5,500	1,300	11,000	500	<100	<100	<100	<250	<25	<25	<2,500	NA	4.97	NA
TBW-N	07/15/2005	48,000	88	8,400	1,300	9,500	660	<100	<100	<100	310	<25	<25	<2,500	NA	5.18	NA
TBW-N	08/17/2005 a	36,000	85	8,500	1,200	11,000	510	<200	<200	<200	<500	<50	<50	<5,000	18.08	5.28	12.80
<b>TBW-N</b>	<b>09/15/2005</b>	<b>20,000</b>	<b>59</b>	<b>2,400</b>	<b>730</b>	<b>9,300</b>	<b>600</b>	<b>&lt;40</b>	<b>&lt;40</b>	<b>&lt;40</b>	<b>500</b>	<b>NA</b>	<b>NA</b>	<b>&lt;1,000</b>	<b>18.08</b>	<b>5.92</b>	<b>12.16</b>
<b>TBW-N</b>	<b>10/17/2005</b>	<b>59,000</b>	<b>58</b>	<b>4,900</b>	<b>1,200</b>	<b>16,000</b>	<b>490</b>	<b>&lt;100</b>	<b>&lt;100</b>	<b>&lt;100</b>	<b>&lt;250</b>	<b>&lt;25</b>	<b>&lt;25</b>	<b>&lt;2,500</b>	<b>18.08</b>	<b>5.96</b>	<b>12.12</b>
<b>TBW-N</b>	<b>11/22/2005</b>	<b>105,000</b>	<b>41.3</b>	<b>8,750</b>	<b>1,550</b>	<b>18,300</b>	<b>443</b>	<b>&lt;0.500</b>	<b>&lt;0.500</b>	<b>&lt;0.500</b>	<b>248</b>	<b>&lt;0.500</b>	<b>&lt;0.500</b>	<b>&lt;50.0</b>	<b>18.08</b>	<b>5.82</b>	<b>12.26</b>

TBW-S	11/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.18	NA
TBW-S	12/01/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.87	NA
TBW-S	12/07/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.15	NA
TBW-S	12/15/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.38	NA
TBW-S	12/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.81	NA
TBW-S	12/27/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.35	NA

TBW-W	11/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.14	NA
TBW-W	12/01/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.86	NA
TBW-W	12/07/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.13	NA
TBW-W	12/15/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.37	NA
TBW-W	12/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.79	NA
TBW-W	12/27/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.32	NA

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**1601 Webster Street**  
**Alameda, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8260B.

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

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B

TBA = Tertiary butyl alcohol or tertiary butanol, analyzed by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane, analyzed by EPA Method 8260B

EDB = Ethylene Dibromide, analyzed by EPA Method 8260B

TOC = Top of Casing Elevation

GW = Groundwater

ug/L = Parts per billion

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

NA = Not applicable

Notes:

a = Extracted out of holding time.

Ethanol analyzed by EPA Method 8260B.

Well TBW-N surveyed September 1, 2005 by Virgil Chavez Land Surveying of Vallejo, CA.

Wells S-2 through S-7 surveyed on November 30, 2005 by Virgil Chavez Land Surveying of Vallejo, CA.

**Blaine Tech Services, Inc.**

September 28, 2005

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 050915-WC-2  
Project: 97564701  
Site: 1601 Webster St., Alameda

Dear Mr. Gearhart,

Attached is our report for your samples received on 09/16/2005 13:10  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
10/31/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: [mbrewer@stl-inc.com](mailto:mbrewer@stl-inc.com)

Sincerely,



Melissa Brewer  
Project Manager



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050915-WC-2

97564701

Received: 09/16/2005 13:10

Site: 1601 Webster St., Alameda

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
TBW-N	09/15/2005 14:35	Water	1

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050915-WC-2  
97564701

Received: 09/16/2005 13:10

Site: 1601 Webster St., Alameda

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>TBW-N</b>	Lab ID: 2005-09-0439 - 1
Sampled: 09/15/2005 14:35	Extracted: 9/22/2005 16:39
Matrix: Water	QC Batch#: 2005/09/22-1B.71
Analysis Flag: L2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	20000	1000	ug/L	20.00	09/22/2005 16:39	
Benzene	59	10	ug/L	20.00	09/22/2005 16:39	
Toluene	2400	10	ug/L	20.00	09/22/2005 16:39	
Ethylbenzene	730	10	ug/L	20.00	09/22/2005 16:39	
Total xylenes	9300	20	ug/L	20.00	09/22/2005 16:39	
tert-Butyl alcohol (TBA)	500	100	ug/L	20.00	09/22/2005 16:39	
Methyl tert-butyl ether (MTBE)	600	10	ug/L	20.00	09/22/2005 16:39	
Di-isopropyl Ether (DIPE)	ND	40	ug/L	20.00	09/22/2005 16:39	
Ethyl tert-butyl ether (ETBE)	ND	40	ug/L	20.00	09/22/2005 16:39	
tert-Amyl methyl ether (TAME)	ND	40	ug/L	20.00	09/22/2005 16:39	
Ethanol	ND	1000	ug/L	20.00	09/22/2005 16:39	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	84.9	73-130	%	20.00	09/22/2005 16:39	
Toluene-d8	88.3	81-114	%	20.00	09/22/2005 16:39	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050915-WC-2  
97564701

Received: 09/16/2005 13:10

Site: 1601 Webster St., Alameda

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Water**

**QC Batch # 2005/09/22-1B.71**

MB: 2005/09/22-1B.71-001

Date Extracted: 09/22/2005 08:46

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	09/27/2005	
Benzene	ND	0.5	ug/L	09/27/2005	
Toluene	ND	0.5	ug/L	09/27/2005	
Ethylbenzene	ND	0.5	ug/L	09/27/2005	
Total xylenes	ND	1.0	ug/L	09/27/2005	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	09/27/2005	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/27/2005	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	09/27/2005	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	09/27/2005	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	09/27/2005	
Ethanol	ND	50	ug/L	09/27/2005	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	82.4	73-130	%	09/27/2005	
Toluene-d8	87.6	81-114	%	09/27/2005	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050915-WC-2  
97564701

Received: 09/16/2005 13:10

Site: 1601 Webster St., Alameda

Batch QC Report										
Prep(s): 5030B						Test(s): 8260B				
<b>Laboratory Control Spike</b>			<b>Water</b>			<b>QC Batch # 2005/09/22-1B.71</b>				
LCS	2005/09/22-1B.71-004		Extracted: 09/22/2005			Analyzed: 09/22/2005 08:19				
LCSD										

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	23.5		25.0	94.0			65-165	20		
Benzene	24.5		25.0	98.0			69-129	20		
Toluene	24.4		25.0	97.6			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	384		500	76.8			73-130	0		
Toluene-d8	441		500	88.2			81-114	0		

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050915-WC-2  
97564701

Received: 09/16/2005 13:10

Site: 1601 Webster St., Alameda

Batch QC Report											
Prep(s): 5030B						Test(s): 8260B					
<b>Matrix Spike ( MS / MSD )</b>				<b>Water</b>				<b>QC Batch # 2005/09/22-1B.71</b>			
MS/MSD						Lab ID: 2005-09-0430 - 004					
MS: 2005/09/22-1B.71-002		Extracted: 09/22/2005		Analyzed: 09/22/2005 11:06		Dilution: 10.00					
MSD: 2005/09/22-1B.71-003		Extracted: 09/22/2005		Analyzed: 09/22/2005 11:33		Dilution: 10.00					

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	248	249	0.735	250	98.9	99.3	0.4	65-165	20		
Benzene	250	253	ND	250	100.0	101.2	1.2	69-129	20		
Toluene	246	249	0.529	250	98.2	99.4	1.2	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	381	381		500	76.2	76.2		73-130	0		
Toluene-d8	441	443		500	88.2	88.6		81-114	0		

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 050915-WC-2

97564701

Received: 09/16/2005 13:10

Site: 1601 Webster St., Alameda

**Legend and Notes**

**Analysis Flag**

L2

Reporting limits were raised due to high level of analyte present in the sample.



**Blaine Tech Services, Inc.**

October 31, 2005

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Michael Ninokata  
Project#: BTS#051017-PC3  
Project: 97564701  
Site: 1601 Webster St., Alameda

Attached is our report for your samples received on 10/18/2005 12:35  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
12/02/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: [mbrewer@stl-inc.com](mailto:mbrewer@stl-inc.com)

Sincerely,



Melissa Brewer  
Project Manager



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Michael Ninokata

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051017-PC3  
97564701

Received: 10/18/2005 12:35

Site: 1601 Webster St., Alameda

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
TBW-N	10/17/2005 14:40	Water	1

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Michael Ninokata

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051017-PC3  
97564701

Received: 10/18/2005 12:35

Site: 1601 Webster St., Alameda

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>TBW-N</b>	Lab ID: 2005-10-0418 - 1
Sampled: 10/17/2005 14:40	Extracted: 10/22/2005 00:14
Matrix: Water	QC Batch#: 2005/10/21-2C.69
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	59000	2500	ug/L	50.00	10/22/2005 00:14	
Benzene	58	25	ug/L	50.00	10/22/2005 00:14	
Toluene	4900	25	ug/L	50.00	10/22/2005 00:14	
Ethylbenzene	1200	25	ug/L	50.00	10/22/2005 00:14	
Total xylenes	16000	50	ug/L	50.00	10/22/2005 00:14	
tert-Butyl alcohol (TBA)	ND	250	ug/L	50.00	10/22/2005 00:14	
Methyl tert-butyl ether (MTBE)	490	25	ug/L	50.00	10/22/2005 00:14	
Di-isopropyl Ether (DIPE)	ND	100	ug/L	50.00	10/22/2005 00:14	
Ethyl tert-butyl ether (ETBE)	ND	100	ug/L	50.00	10/22/2005 00:14	
tert-Amyl methyl ether (TAME)	ND	100	ug/L	50.00	10/22/2005 00:14	
1,2-DCA	ND	25	ug/L	50.00	10/22/2005 00:14	
EDB	ND	25	ug/L	50.00	10/22/2005 00:14	
Ethanol	ND	2500	ug/L	50.00	10/22/2005 00:14	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	98.5	73-130	%	50.00	10/22/2005 00:14	
Toluene-d8	94.2	81-114	%	50.00	10/22/2005 00:14	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Michael Ninokata

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051017-PC3  
97564701

Received: 10/18/2005 12:35

Site: 1601 Webster St., Alameda

**Batch QC Report**

Prep(s): 5030B

**Method Blank**

MB: 2005/10/21-2C.69-019

**Water**

Test(s): 8260B

**QC Batch # 2005/10/21-2C.69**

Date Extracted: 10/21/2005 19:19

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	10/21/2005 19:19	
Benzene	ND	0.5	ug/L	10/21/2005 19:19	
Toluene	ND	0.5	ug/L	10/21/2005 19:19	
Ethylbenzene	ND	0.5	ug/L	10/21/2005 19:19	
Total xylenes	ND	1.0	ug/L	10/21/2005 19:19	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	10/21/2005 19:19	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	10/21/2005 19:19	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	10/21/2005 19:19	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	10/21/2005 19:19	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	10/21/2005 19:19	
1,2-DCA	ND	0.5	ug/L	10/21/2005 19:19	
EDB	ND	0.5	ug/L	10/21/2005 19:19	
Ethanol	ND	50	ug/L	10/21/2005 19:19	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	90.4	73-130	%	10/21/2005 19:19	
Toluene-d8	90.4	81-114	%	10/21/2005 19:19	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Michael Ninokata

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051017-PC3  
97564701

Received: 10/18/2005 12:35

Site: 1601 Webster St., Alameda

Batch QC Report									
Prep(s): 5030B					Test(s): 8260B				
<b>Laboratory Control Spike</b>			<b>Water</b>			<b>QC Batch # 2005/10/21-2C.69</b>			
LCS	2005/10/21-2C.69-057		Extracted: 10/21/2005			Analyzed: 10/21/2005 18:57			
LCSD									

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	27.9		25	111.6			65-165	20		
Benzene	22.8		25	91.2			69-129	20		
Toluene	24.0		25	96.0			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	422		500	84.4			73-130			
Toluene-d8	457		500	91.4			81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Michael Ninokata

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051017-PC3  
97564701

Received: 10/18/2005 12:35

Site: 1601 Webster St., Alameda

Batch QC Report											
Prep(s): 5030B						Test(s): 8260B					
<b>Matrix Spike ( MS / MSD )</b>				<b>Water</b>				<b>QC Batch # 2005/10/21-2C.69</b>			
MS/MSD						Lab ID: 2005-10-0332 - 002					
MS: 2005/10/21-2C.69-049			Extracted: 10/21/2005			Analyzed: 10/21/2005 22:49			Dilution: 1.00		
MSD: 2005/10/21-2C.69-010			Extracted: 10/21/2005			Analyzed: 10/21/2005 23:10			Dilution: 1.00		

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	27.3	25.8	ND	25	109.2	103.2	5.6	65-165	20		
Benzene	22.8	22.0	ND	25	91.2	88.0	3.6	69-129	20		
Toluene	23.1	23.1	ND	25	92.4	92.4	0.0	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	462	448		500	92.4	89.6		73-130			
Toluene-d8	464	463		500	92.8	92.6		81-114			



December 12, 2005

Client: Cambria Environmental Tech. Sonoma/ Shell (13674)  
270 Perkins Street  
Sonoma, CA 95476  
Attn: Ana Friel

Work Order: NOK3314  
Project Name: 1601 Webster Street, Alameda, CA  
Project Nbr: 051122-SS1  
Date Received: 11/30/05

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
TBW-N	NOK3314-01	11/22/05 10:32
S-2	NOK3314-02	11/22/05 11:40
S-3	NOK3314-03	11/22/05 11:50
S-4	NOK3314-04	11/22/05 12:02
S-5	NOK3314-05	11/22/05 12:10
S-6	NOK3314-06	11/22/05 09:15
S-7	NOK3314-07	11/22/05 10:45

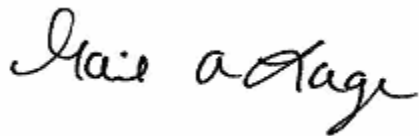
An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

California Certification Number: 01168CA

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:



Gail Lage  
Senior Project Manager

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
<b>Sample ID: NOK3314-01 (TBW-N - Ground Water) Sampled: 11/22/05 10:32</b>									
Oxygenates by EPA 8260B									
Tert-Amyl Methyl Ether	ND		ug/L	0.500	1	12/04/05 08:54	SW846 8260B	JJR	5120423
1,2-Dibromoethane (EDB)	ND		ug/L	0.500	1	12/04/05 08:54	SW846 8260B	JJR	5120423
Benzene	41.3		ug/L	0.500	1	12/04/05 08:54	SW846 8260B	JJR	5120423
1,2-Dichloroethane	ND		ug/L	0.500	1	12/04/05 08:54	SW846 8260B	JJR	5120423
Ethylbenzene	1550		ug/L	5.00	10	12/05/05 09:46	SW846 8260B	JJR	5121249
Ethanol	ND		ug/L	50.0	1	12/04/05 08:54	SW846 8260B	JJR	5120423
Toluene	8750		ug/L	50.0	100	12/05/05 10:08	SW846 8260B	JJR	5121249
Ethyl tert-Butyl Ether	ND		ug/L	0.500	1	12/04/05 08:54	SW846 8260B	JJR	5120423
Isopropyl Ether	ND		ug/L	0.500	1	12/04/05 08:54	SW846 8260B	JJR	5120423
Methyl tert-Butyl Ether	443		ug/L	5.00	10	12/05/05 09:46	SW846 8260B	JJR	5121249
Xylenes, total	18300		ug/L	50.0	100	12/05/05 10:08	SW846 8260B	JJR	5121249
Tertiary Butyl Alcohol	248		ug/L	10.0	1	12/04/05 08:54	SW846 8260B	JJR	5120423
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	83 %					12/04/05 08:54	SW846 8260B	JJR	5120423
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	86 %					12/05/05 09:46	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	84 %					12/05/05 10:08	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (79-122%)	96 %					12/04/05 08:54	SW846 8260B	JJR	5120423
Surrogate: Dibromofluoromethane (79-122%)	101 %					12/05/05 09:46	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (79-122%)	100 %					12/05/05 10:08	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (78-121%)	99 %					12/04/05 08:54	SW846 8260B	JJR	5120423
Surrogate: Toluene-d8 (78-121%)	99 %					12/05/05 09:46	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (78-121%)	102 %					12/05/05 10:08	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (78-126%)	111 %					12/04/05 08:54	SW846 8260B	JJR	5120423
Surrogate: 4-Bromofluorobenzene (78-126%)	109 %					12/05/05 09:46	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (78-126%)	109 %					12/05/05 10:08	SW846 8260B	JJR	5121249
Purgeable Petroleum Hydrocarbons									
Gasoline Range Organics	105000		ug/L	500	10	12/05/05 09:46	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (0-200%)	86 %					12/05/05 09:46	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (0-200%)	101 %					12/05/05 09:46	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (0-200%)	99 %					12/05/05 09:46	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (0-200%)	109 %					12/05/05 09:46	SW846 8260B	JJR	5121249
<b>Sample ID: NOK3314-02 (S-2 - Ground Water) Sampled: 11/22/05 11:40</b>									
Oxygenates by EPA 8260B									
Tert-Amyl Methyl Ether	0.570		ug/L	0.500	1	12/04/05 20:21	SW846 8260B	JJR	5121249
Benzene	0.630		ug/L	0.500	1	12/04/05 20:21	SW846 8260B	JJR	5121249
Ethyl tert-Butyl Ether	ND		ug/L	0.500	1	12/04/05 20:21	SW846 8260B	JJR	5121249
Ethylbenzene	0.500		ug/L	0.500	1	12/04/05 20:21	SW846 8260B	JJR	5121249
Isopropyl Ether	ND		ug/L	0.500	1	12/04/05 20:21	SW846 8260B	JJR	5121249
Methyl tert-Butyl Ether	406		ug/L	2.50	5	12/04/05 20:43	SW846 8260B	JJR	5121249
Toluene	0.500		ug/L	0.500	1	12/04/05 20:21	SW846 8260B	JJR	5121249
Tertiary Butyl Alcohol	18.0		ug/L	10.0	1	12/04/05 20:21	SW846 8260B	JJR	5121249
Xylenes, total	3.10		ug/L	0.500	1	12/04/05 20:21	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	82 %					12/04/05 20:21	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (79-122%)	99 %					12/04/05 20:21	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (78-121%)	100 %					12/04/05 20:21	SW846 8260B	JJR	5121249



Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
<b>Sample ID: NOK3314-02 (S-2 - Ground Water) - cont. Sampled: 11/22/05 11:40</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Surrogate: 4-Bromofluorobenzene (78-126%)	114 %					12/04/05 20:21	SW846 8260B	JJR	5121249
Purgeable Petroleum Hydrocarbons									
Gasoline Range Organics	996		ug/L	50.0	1	12/04/05 20:21	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (0-200%)	82 %					12/04/05 20:21	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (0-200%)	99 %					12/04/05 20:21	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (0-200%)	100 %					12/04/05 20:21	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (0-200%)	114 %					12/04/05 20:21	SW846 8260B	JJR	5121249
<b>Sample ID: NOK3314-03 (S-3 - Ground Water) Sampled: 11/22/05 11:50</b>									
Oxygenates by EPA 8260B									
Tert-Amyl Methyl Ether	3.44		ug/L	0.500	1	12/04/05 21:05	SW846 8260B	JJR	5121249
Benzene	ND		ug/L	0.500	1	12/04/05 21:05	SW846 8260B	JJR	5121249
Ethyl tert-Butyl Ether	ND		ug/L	0.500	1	12/04/05 21:05	SW846 8260B	JJR	5121249
Ethylbenzene	ND		ug/L	0.500	1	12/04/05 21:05	SW846 8260B	JJR	5121249
Isopropyl Ether	ND		ug/L	0.500	1	12/04/05 21:05	SW846 8260B	JJR	5121249
Methyl tert-Butyl Ether	3730		ug/L	25.0	50	12/06/05 12:52	SW846 8260B	JJR	5120573
Toluene	ND		ug/L	0.500	1	12/04/05 21:05	SW846 8260B	JJR	5121249
Tertiary Butyl Alcohol	26.0		ug/L	10.0	1	12/04/05 21:05	SW846 8260B	JJR	5121249
Xylenes, total	0.900		ug/L	0.500	1	12/04/05 21:05	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	87 %					12/04/05 21:05	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (79-122%)	99 %					12/04/05 21:05	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (78-121%)	101 %					12/04/05 21:05	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (78-126%)	111 %					12/04/05 21:05	SW846 8260B	JJR	5121249
Purgeable Petroleum Hydrocarbons									
Gasoline Range Organics	3900		ug/L	50.0	1	12/04/05 21:05	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (0-200%)	87 %					12/04/05 21:05	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (0-200%)	99 %					12/04/05 21:05	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (0-200%)	101 %					12/04/05 21:05	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (0-200%)	111 %					12/04/05 21:05	SW846 8260B	JJR	5121249
<b>Sample ID: NOK3314-04 (S-4 - Ground Water) Sampled: 11/22/05 12:02</b>									
Oxygenates by EPA 8260B									
Tert-Amyl Methyl Ether	3.57		ug/L	0.500	1	12/04/05 21:49	SW846 8260B	JJR	5121249
Benzene	ND		ug/L	0.500	1	12/04/05 21:49	SW846 8260B	JJR	5121249
Ethyl tert-Butyl Ether	ND		ug/L	0.500	1	12/04/05 21:49	SW846 8260B	JJR	5121249
Ethylbenzene	ND		ug/L	0.500	1	12/04/05 21:49	SW846 8260B	JJR	5121249
Isopropyl Ether	ND		ug/L	0.500	1	12/04/05 21:49	SW846 8260B	JJR	5121249
Methyl tert-Butyl Ether	3450		ug/L	25.0	50	12/06/05 19:10	SW846 8260B	JJR	5120573
Toluene	ND		ug/L	0.500	1	12/04/05 21:49	SW846 8260B	JJR	5121249
Tertiary Butyl Alcohol	26.0		ug/L	10.0	1	12/04/05 21:49	SW846 8260B	JJR	5121249
Xylenes, total	0.660		ug/L	0.500	1	12/04/05 21:49	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	85 %					12/04/05 21:49	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (79-122%)	101 %					12/04/05 21:49	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (78-121%)	100 %					12/04/05 21:49	SW846 8260B	JJR	5121249

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
<b>Sample ID: NOK3314-04 (S-4 - Ground Water) - cont. Sampled: 11/22/05 12:02</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Surrogate: 4-Bromofluorobenzene (78-126%)	109 %					12/04/05 21:49	SW846 8260B	JJR	5121249
Purgeable Petroleum Hydrocarbons									
Gasoline Range Organics	4570		ug/L	50.0	1	12/04/05 21:49	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (0-200%)	85 %					12/04/05 21:49	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (0-200%)	101 %					12/04/05 21:49	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (0-200%)	100 %					12/04/05 21:49	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (0-200%)	109 %					12/04/05 21:49	SW846 8260B	JJR	5121249
<b>Sample ID: NOK3314-05 (S-5 - Ground Water) Sampled: 11/22/05 12:10</b>									
Oxygenates by EPA 8260B									
Tert-Amyl Methyl Ether	ND		ug/L	0.500	1	12/04/05 22:33	SW846 8260B	JJR	5121249
Benzene	0.900		ug/L	0.500	1	12/04/05 22:33	SW846 8260B	JJR	5121249
Ethyl tert-Butyl Ether	ND		ug/L	0.500	1	12/04/05 22:33	SW846 8260B	JJR	5121249
Ethylbenzene	1.79		ug/L	0.500	1	12/04/05 22:33	SW846 8260B	JJR	5121249
Isopropyl Ether	ND		ug/L	0.500	1	12/04/05 22:33	SW846 8260B	JJR	5121249
Methyl tert-Butyl Ether	302		ug/L	2.50	5	12/04/05 22:55	SW846 8260B	JJR	5121249
Toluene	ND		ug/L	0.500	1	12/04/05 22:33	SW846 8260B	JJR	5121249
Tertiary Butyl Alcohol	397		ug/L	10.0	1	12/04/05 22:33	SW846 8260B	JJR	5121249
Xylenes, total	4.91		ug/L	0.500	1	12/04/05 22:33	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	81 %					12/04/05 22:33	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (79-122%)	102 %					12/04/05 22:33	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (78-121%)	101 %					12/04/05 22:33	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (78-126%)	108 %					12/04/05 22:33	SW846 8260B	JJR	5121249
Purgeable Petroleum Hydrocarbons									
Gasoline Range Organics	1010		ug/L	50.0	1	12/04/05 22:33	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (0-200%)	81 %					12/04/05 22:33	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (0-200%)	102 %					12/04/05 22:33	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (0-200%)	101 %					12/04/05 22:33	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (0-200%)	108 %					12/04/05 22:33	SW846 8260B	JJR	5121249
<b>Sample ID: NOK3314-06 (S-6 - Ground Water) Sampled: 11/22/05 09:15</b>									
Oxygenates by EPA 8260B									
Tert-Amyl Methyl Ether	ND		ug/L	0.500	1	12/04/05 23:17	SW846 8260B	JJR	5121249
Benzene	5.14		ug/L	0.500	1	12/04/05 23:17	SW846 8260B	JJR	5121249
Ethyl tert-Butyl Ether	ND		ug/L	0.500	1	12/04/05 23:17	SW846 8260B	JJR	5121249
Ethylbenzene	32.1		ug/L	0.500	1	12/04/05 23:17	SW846 8260B	JJR	5121249
Isopropyl Ether	ND		ug/L	0.500	1	12/04/05 23:17	SW846 8260B	JJR	5121249
Methyl tert-Butyl Ether	ND		ug/L	0.500	1	12/04/05 23:17	SW846 8260B	JJR	5121249
Toluene	0.690		ug/L	0.500	1	12/04/05 23:17	SW846 8260B	JJR	5121249
Tertiary Butyl Alcohol	14.2		ug/L	10.0	1	12/04/05 23:17	SW846 8260B	JJR	5121249
Xylenes, total	934		ug/L	5.00	10	12/04/05 23:39	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	85 %					12/04/05 23:17	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	85 %					12/04/05 23:39	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (79-122%)	102 %					12/04/05 23:17	SW846 8260B	JJR	5121249

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
<b>Sample ID: NOK3314-06RE1 (S-6 - Ground Water) - cont. Sampled: 11/22/05 09:15</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Surrogate: Dibromofluoromethane (79-122%)	99 %					12/04/05 23:39	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (78-121%)	101 %					12/04/05 23:17	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (78-121%)	98 %					12/04/05 23:39	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (78-126%)	105 %					12/04/05 23:17	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (78-126%)	107 %					12/04/05 23:39	SW846 8260B	JJR	5121249
Purgeable Petroleum Hydrocarbons									
Gasoline Range Organics	15800		ug/L	500	10	12/04/05 23:39	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (0-200%)	85 %					12/04/05 23:39	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (0-200%)	99 %					12/04/05 23:39	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (0-200%)	98 %					12/04/05 23:39	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (0-200%)	107 %					12/04/05 23:39	SW846 8260B	JJR	5121249
<b>Sample ID: NOK3314-07 (S-7 - Ground Water) Sampled: 11/22/05 10:45</b>									
Oxygenates by EPA 8260B									
Tert-Amyl Methyl Ether	ND		ug/L	0.500	1	12/04/05 11:06	SW846 8260B	JJR	5120423
Benzene	2680		ug/L	25.0	50	12/06/05 19:32	SW846 8260B	JJR	5120573
Ethyl tert-Butyl Ether	ND		ug/L	0.500	1	12/04/05 11:06	SW846 8260B	JJR	5120423
Ethylbenzene	969		ug/L	10.0	20	12/05/05 10:30	SW846 8260B	JJR	5121249
Isopropyl Ether	ND		ug/L	0.500	1	12/04/05 11:06	SW846 8260B	JJR	5120423
Methyl tert-Butyl Ether	1.49		ug/L	0.500	1	12/04/05 11:06	SW846 8260B	JJR	5120423
Toluene	2980		ug/L	10.0	20	12/05/05 10:30	SW846 8260B	JJR	5121249
Tertiary Butyl Alcohol	53.3		ug/L	10.0	1	12/04/05 11:06	SW846 8260B	JJR	5120423
Xylenes, total	6360		ug/L	10.0	20	12/05/05 10:30	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	84 %					12/04/05 11:06	SW846 8260B	JJR	5120423
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	85 %					12/05/05 10:30	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (70-130%)	86 %					12/06/05 19:32	SW846 8260B	JJR	5120573
Surrogate: Dibromofluoromethane (79-122%)	99 %					12/04/05 11:06	SW846 8260B	JJR	5120423
Surrogate: Dibromofluoromethane (79-122%)	100 %					12/05/05 10:30	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (79-122%)	102 %					12/06/05 19:32	SW846 8260B	JJR	5120573
Surrogate: Toluene-d8 (78-121%)	97 %					12/04/05 11:06	SW846 8260B	JJR	5120423
Surrogate: Toluene-d8 (78-121%)	100 %					12/05/05 10:30	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (78-121%)	108 %					12/06/05 19:32	SW846 8260B	JJR	5120573
Surrogate: 4-Bromofluorobenzene (78-126%)	108 %					12/04/05 11:06	SW846 8260B	JJR	5120423
Surrogate: 4-Bromofluorobenzene (78-126%)	109 %					12/05/05 10:30	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (78-126%)	111 %					12/06/05 19:32	SW846 8260B	JJR	5120573
Purgeable Petroleum Hydrocarbons									
Gasoline Range Organics	51100		ug/L	1000	20	12/05/05 10:30	SW846 8260B	JJR	5121249
Surrogate: 1,2-Dichloroethane-d4 (0-200%)	85 %					12/05/05 10:30	SW846 8260B	JJR	5121249
Surrogate: Dibromofluoromethane (0-200%)	100 %					12/05/05 10:30	SW846 8260B	JJR	5121249
Surrogate: Toluene-d8 (0-200%)	100 %					12/05/05 10:30	SW846 8260B	JJR	5121249
Surrogate: 4-Bromofluorobenzene (0-200%)	109 %					12/05/05 10:30	SW846 8260B	JJR	5121249

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

**PROJECT QUALITY CONTROL DATA**  
**Blank**

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
<b>Oxygenates by EPA 8260B</b>						
<b>5120423-BLK1</b>						
Tert-Amyl Methyl Ether	<0.200		ug/L	5120423	5120423-BLK1	12/04/05 08:10
1,2-Dibromoethane (EDB)	<0.250		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Benzene	<0.200		ug/L	5120423	5120423-BLK1	12/04/05 08:10
1,2-Dichloroethane	<0.390		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Ethylbenzene	<0.200		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Ethanol	<39.2		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Toluene	<0.200		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Ethyl tert-Butyl Ether	<0.200		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Isopropyl Ether	<0.200		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Methyl tert-Butyl Ether	<0.200		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Xylenes, total	<0.350		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Tertiary Butyl Alcohol	<5.06		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Surrogate: 1,2-Dichloroethane-d4	86%			5120423	5120423-BLK1	12/04/05 08:10
Surrogate: Dibromofluoromethane	103%			5120423	5120423-BLK1	12/04/05 08:10
Surrogate: Toluene-d8	100%			5120423	5120423-BLK1	12/04/05 08:10
Surrogate: 4-Bromofluorobenzene	107%			5120423	5120423-BLK1	12/04/05 08:10
<b>5120573-BLK1</b>						
Tert-Amyl Methyl Ether	<0.200		ug/L	5120573	5120573-BLK1	12/06/05 12:30
Benzene	<0.200		ug/L	5120573	5120573-BLK1	12/06/05 12:30
Ethyl tert-Butyl Ether	<0.200		ug/L	5120573	5120573-BLK1	12/06/05 12:30
Ethylbenzene	<0.200		ug/L	5120573	5120573-BLK1	12/06/05 12:30
Isopropyl Ether	<0.200		ug/L	5120573	5120573-BLK1	12/06/05 12:30
Methyl tert-Butyl Ether	<0.200		ug/L	5120573	5120573-BLK1	12/06/05 12:30
Toluene	<0.200		ug/L	5120573	5120573-BLK1	12/06/05 12:30
Tertiary Butyl Alcohol	<5.06		ug/L	5120573	5120573-BLK1	12/06/05 12:30
Xylenes, total	<0.350		ug/L	5120573	5120573-BLK1	12/06/05 12:30
Surrogate: 1,2-Dichloroethane-d4	86%			5120573	5120573-BLK1	12/06/05 12:30
Surrogate: Dibromofluoromethane	101%			5120573	5120573-BLK1	12/06/05 12:30
Surrogate: Toluene-d8	102%			5120573	5120573-BLK1	12/06/05 12:30
Surrogate: 4-Bromofluorobenzene	109%			5120573	5120573-BLK1	12/06/05 12:30
<b>5121249-BLK1</b>						
Tert-Amyl Methyl Ether	<0.200		ug/L	5121249	5121249-BLK1	12/04/05 17:25
1,2-Dibromoethane (EDB)	<0.250		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Benzene	<0.200		ug/L	5121249	5121249-BLK1	12/04/05 17:25
1,2-Dichloroethane	<0.390		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Ethylbenzene	<0.200		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Ethanol	<39.2		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Toluene	<0.200		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Ethyl tert-Butyl Ether	<0.200		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Isopropyl Ether	<0.200		ug/L	5121249	5121249-BLK1	12/04/05 17:25

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

**PROJECT QUALITY CONTROL DATA**  
**Blank - Cont.**

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
<b>Oxygenates by EPA 8260B</b>						
<b>5121249-BLK1</b>						
Methyl tert-Butyl Ether	<0.200		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Xylenes, total	<0.350		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Tertiary Butyl Alcohol	<5.06		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Surrogate: 1,2-Dichloroethane-d4	86%			5121249	5121249-BLK1	12/04/05 17:25
Surrogate: Dibromofluoromethane	103%			5121249	5121249-BLK1	12/04/05 17:25
Surrogate: Toluene-d8	100%			5121249	5121249-BLK1	12/04/05 17:25
Surrogate: 4-Bromofluorobenzene	109%			5121249	5121249-BLK1	12/04/05 17:25
<b>5121249-BLK2</b>						
Tert-Amyl Methyl Ether	<0.200		ug/L	5121249	5121249-BLK2	12/05/05 05:10
1,2-Dibromoethane (EDB)	<0.250		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Benzene	<0.200		ug/L	5121249	5121249-BLK2	12/05/05 05:10
1,2-Dichloroethane	<0.390		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Ethylbenzene	<0.200		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Ethanol	<39.2		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Toluene	<0.200		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Ethyl tert-Butyl Ether	<0.200		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Isopropyl Ether	<0.200		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Methyl tert-Butyl Ether	<0.200		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Xylenes, total	<0.350		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Tertiary Butyl Alcohol	<5.06		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Surrogate: 1,2-Dichloroethane-d4	84%			5121249	5121249-BLK2	12/05/05 05:10
Surrogate: Dibromofluoromethane	102%			5121249	5121249-BLK2	12/05/05 05:10
Surrogate: Toluene-d8	105%			5121249	5121249-BLK2	12/05/05 05:10
Surrogate: 4-Bromofluorobenzene	104%			5121249	5121249-BLK2	12/05/05 05:10
<b>Purgeable Petroleum Hydrocarbons</b>						
<b>5120423-BLK1</b>						
Gasoline Range Organics	<50.0		ug/L	5120423	5120423-BLK1	12/04/05 08:10
Surrogate: 1,2-Dichloroethane-d4	86%			5120423	5120423-BLK1	12/04/05 08:10
Surrogate: Dibromofluoromethane	103%			5120423	5120423-BLK1	12/04/05 08:10
Surrogate: Toluene-d8	100%			5120423	5120423-BLK1	12/04/05 08:10
Surrogate: 4-Bromofluorobenzene	107%			5120423	5120423-BLK1	12/04/05 08:10
<b>5121249-BLK1</b>						
Gasoline Range Organics	<50.0		ug/L	5121249	5121249-BLK1	12/04/05 17:25
Surrogate: 1,2-Dichloroethane-d4	86%			5121249	5121249-BLK1	12/04/05 17:25
Surrogate: Dibromofluoromethane	103%			5121249	5121249-BLK1	12/04/05 17:25
Surrogate: Toluene-d8	100%			5121249	5121249-BLK1	12/04/05 17:25
Surrogate: 4-Bromofluorobenzene	109%			5121249	5121249-BLK1	12/04/05 17:25

**5121249-BLK2**

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
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 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

**PROJECT QUALITY CONTROL DATA**  
**Blank - Cont.**

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
<b>Purgeable Petroleum Hydrocarbons</b>						
<b>5121249-BLK2</b>						
Gasoline Range Organics	<50.0		ug/L	5121249	5121249-BLK2	12/05/05 05:10
Surrogate: 1,2-Dichloroethane-d4	84%			5121249	5121249-BLK2	12/05/05 05:10
Surrogate: Dibromofluoromethane	102%			5121249	5121249-BLK2	12/05/05 05:10
Surrogate: Toluene-d8	105%			5121249	5121249-BLK2	12/05/05 05:10
Surrogate: 4-Bromofluorobenzene	104%			5121249	5121249-BLK2	12/05/05 05:10

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
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Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

**PROJECT QUALITY CONTROL DATA**  
**LCS**

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
<b>Oxygenates by EPA 8260B</b>								
<b>5120423-BS1</b>								
Tert-Amyl Methyl Ether	50.0	49.2		ug/L	98%	56 - 145	5120423	12/04/05 06:42
1,2-Dibromoethane (EDB)	50.0	53.1		ug/L	106%	75 - 128	5120423	12/04/05 06:42
Benzene	50.0	48.0		ug/L	96%	79 - 123	5120423	12/04/05 06:42
1,2-Dichloroethane	50.0	39.1		ug/L	78%	74 - 131	5120423	12/04/05 06:42
Ethylbenzene	50.0	47.5		ug/L	95%	79 - 125	5120423	12/04/05 06:42
Ethanol	5000	4740		ug/L	95%	55 - 152	5120423	12/04/05 06:42
Toluene	50.0	49.5		ug/L	99%	78 - 122	5120423	12/04/05 06:42
Ethyl tert-Butyl Ether	50.0	46.0		ug/L	92%	64 - 141	5120423	12/04/05 06:42
Isopropyl Ether	50.0	45.1		ug/L	90%	73 - 135	5120423	12/04/05 06:42
Methyl tert-Butyl Ether	50.0	45.7	M3	ug/L	91%	66 - 142	5120423	12/04/05 06:42
Xylenes, total	150	143		ug/L	95%	79 - 130	5120423	12/04/05 06:42
Tertiary Butyl Alcohol	500	495		ug/L	99%	42 - 154	5120423	12/04/05 06:42
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.0	41.3			83%	70 - 130	5120423	12/04/05 06:42
<i>Surrogate: Dibromofluoromethane</i>	50.0	48.7			97%	79 - 122	5120423	12/04/05 06:42
<i>Surrogate: Toluene-d8</i>	50.0	50.1			100%	78 - 121	5120423	12/04/05 06:42
<i>Surrogate: 4-Bromofluorobenzene</i>	50.0	53.0			106%	78 - 126	5120423	12/04/05 06:42
<b>5120573-BS1</b>								
Tert-Amyl Methyl Ether	50.0	46.9		ug/L	94%	56 - 145	5120573	12/06/05 20:38
Benzene	50.0	46.4		ug/L	93%	79 - 123	5120573	12/06/05 20:38
Ethyl tert-Butyl Ether	50.0	45.4		ug/L	91%	64 - 141	5120573	12/06/05 20:38
Ethylbenzene	50.0	47.6		ug/L	95%	79 - 125	5120573	12/06/05 20:38
Isopropyl Ether	50.0	41.5		ug/L	83%	73 - 135	5120573	12/06/05 20:38
Methyl tert-Butyl Ether	50.0	41.0		ug/L	82%	66 - 142	5120573	12/06/05 20:38
Toluene	50.0	50.5		ug/L	101%	78 - 122	5120573	12/06/05 20:38
Tertiary Butyl Alcohol	500	393		ug/L	79%	42 - 154	5120573	12/06/05 20:38
Xylenes, total	150	146		ug/L	97%	79 - 130	5120573	12/06/05 20:38
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.0	42.3			85%	70 - 130	5120573	12/06/05 20:38
<i>Surrogate: Dibromofluoromethane</i>	50.0	49.6			99%	79 - 122	5120573	12/06/05 20:38
<i>Surrogate: Toluene-d8</i>	50.0	51.2			102%	78 - 121	5120573	12/06/05 20:38
<i>Surrogate: 4-Bromofluorobenzene</i>	50.0	54.9			110%	78 - 126	5120573	12/06/05 20:38
<b>5121249-BS1</b>								
Tert-Amyl Methyl Ether	50.0	42.7		ug/L	85%	56 - 145	5121249	12/04/05 15:53
1,2-Dibromoethane (EDB)	50.0	49.5		ug/L	99%	75 - 128	5121249	12/04/05 15:53
Benzene	50.0	43.1		ug/L	86%	79 - 123	5121249	12/04/05 15:53
1,2-Dichloroethane	50.0	34.0	L2	ug/L	68%	74 - 131	5121249	12/04/05 15:53
Ethylbenzene	50.0	42.1		ug/L	84%	79 - 125	5121249	12/04/05 15:53
Ethanol	5000	4410		ug/L	88%	55 - 152	5121249	12/04/05 15:53
Toluene	50.0	46.5		ug/L	93%	78 - 122	5121249	12/04/05 15:53
Ethyl tert-Butyl Ether	50.0	41.2		ug/L	82%	64 - 141	5121249	12/04/05 15:53
Isopropyl Ether	50.0	38.8		ug/L	78%	73 - 135	5121249	12/04/05 15:53



Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

**PROJECT QUALITY CONTROL DATA**  
**LCS - Cont.**

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
<b>Oxygenates by EPA 8260B</b>								
<b>5121249-BS1</b>								
Methyl tert-Butyl Ether	50.0	38.6		ug/L	77%	66 - 142	5121249	12/04/05 15:53
Xylenes, total	150	128		ug/L	85%	79 - 130	5121249	12/04/05 15:53
Tertiary Butyl Alcohol	500	414		ug/L	83%	42 - 154	5121249	12/04/05 15:53
Surrogate: 1,2-Dichloroethane-d4	50.0	41.9			84%	70 - 130	5121249	12/04/05 15:53
Surrogate: Dibromofluoromethane	50.0	48.6			97%	79 - 122	5121249	12/04/05 15:53
Surrogate: Toluene-d8	50.0	48.4			97%	78 - 121	5121249	12/04/05 15:53
Surrogate: 4-Bromofluorobenzene	50.0	56.4			113%	78 - 126	5121249	12/04/05 15:53
<b>5121249-BS2</b>								
Tert-Amyl Methyl Ether	50.0	46.5		ug/L	93%	56 - 145	5121249	12/05/05 03:42
1,2-Dibromoethane (EDB)	50.0	53.0		ug/L	106%	75 - 128	5121249	12/05/05 03:42
Benzene	50.0	45.1		ug/L	90%	79 - 123	5121249	12/05/05 03:42
1,2-Dichloroethane	50.0	36.5	A-01, L2	ug/L	73%	74 - 131	5121249	12/05/05 03:42
Ethylbenzene	50.0	45.0		ug/L	90%	79 - 125	5121249	12/05/05 03:42
Ethanol	5000	4570		ug/L	91%	55 - 152	5121249	12/05/05 03:42
Toluene	50.0	51.0		ug/L	102%	78 - 122	5121249	12/05/05 03:42
Ethyl tert-Butyl Ether	50.0	43.3		ug/L	87%	64 - 141	5121249	12/05/05 03:42
Isopropyl Ether	50.0	42.1		ug/L	84%	73 - 135	5121249	12/05/05 03:42
Methyl tert-Butyl Ether	50.0	42.0		ug/L	84%	66 - 142	5121249	12/05/05 03:42
Xylenes, total	150	137		ug/L	91%	79 - 130	5121249	12/05/05 03:42
Tertiary Butyl Alcohol	500	469		ug/L	94%	42 - 154	5121249	12/05/05 03:42
Surrogate: 1,2-Dichloroethane-d4	50.0	43.2			86%	70 - 130	5121249	12/05/05 03:42
Surrogate: Dibromofluoromethane	50.0	49.3			99%	79 - 122	5121249	12/05/05 03:42
Surrogate: Toluene-d8	50.0	51.0			102%	78 - 121	5121249	12/05/05 03:42
Surrogate: 4-Bromofluorobenzene	50.0	55.3			111%	78 - 126	5121249	12/05/05 03:42
<b>Purgeable Petroleum Hydrocarbons</b>								
<b>5120423-BS1</b>								
Gasoline Range Organics	3050	3020		ug/L	99%	67 - 130	5120423	12/04/05 06:42
Surrogate: 1,2-Dichloroethane-d4	50.0	41.3			83%	70 - 130	5120423	12/04/05 06:42
Surrogate: Dibromofluoromethane	50.0	48.7			97%	70 - 130	5120423	12/04/05 06:42
Surrogate: Toluene-d8	50.0	50.1			100%	70 - 130	5120423	12/04/05 06:42
Surrogate: 4-Bromofluorobenzene	50.0	53.0			106%	70 - 130	5120423	12/04/05 06:42
<b>5121249-BS1</b>								
Gasoline Range Organics	3050	2890		ug/L	95%	67 - 130	5121249	12/04/05 15:53
Surrogate: 1,2-Dichloroethane-d4	50.0	41.9			84%	70 - 130	5121249	12/04/05 15:53
Surrogate: Dibromofluoromethane	50.0	48.6			97%	70 - 130	5121249	12/04/05 15:53
Surrogate: Toluene-d8	50.0	48.4			97%	70 - 130	5121249	12/04/05 15:53
Surrogate: 4-Bromofluorobenzene	50.0	56.4			113%	70 - 130	5121249	12/04/05 15:53

**5121249-BS2**



Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

**PROJECT QUALITY CONTROL DATA**  
**LCS - Cont.**

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
<b>Purgeable Petroleum Hydrocarbons</b>								
<b>5121249-BS2</b>								
Gasoline Range Organics	3050	3040		ug/L	100%	67 - 130	5121249	12/05/05 03:42
Surrogate: 1,2-Dichloroethane-d4	50.0	43.2			86%	70 - 130	5121249	12/05/05 03:42
Surrogate: Dibromofluoromethane	50.0	49.3			99%	70 - 130	5121249	12/05/05 03:42
Surrogate: Toluene-d8	50.0	51.0			102%	70 - 130	5121249	12/05/05 03:42
Surrogate: 4-Bromofluorobenzene	50.0	55.3			111%	70 - 130	5121249	12/05/05 03:42

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 Project Number: 051122-SS1  
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**PROJECT QUALITY CONTROL DATA**  
**Matrix Spike**

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
<b>Oxygenates by EPA 8260B</b>										
<b>5120423-MS1</b>										
Tert-Amyl Methyl Ether	8.88	54.2		ug/L	50.0	91%	45 - 155	5120423	NOK3380-01	12/04/05 13:18
1,2-Dibromoethane (EDB)	ND	51.2		ug/L	50.0	102%	71 - 138	5120423	NOK3380-01	12/04/05 13:18
Benzene	ND	44.9		ug/L	50.0	90%	71 - 137	5120423	NOK3380-01	12/04/05 13:18
1,2-Dichloroethane	2.02	36.3	M8	ug/L	50.0	69%	70 - 140	5120423	NOK3380-01	12/04/05 13:18
Ethylbenzene	ND	42.4		ug/L	50.0	85%	72 - 139	5120423	NOK3380-01	12/04/05 13:18
Ethanol	82.1	4260		ug/L	5000	84%	49 - 158	5120423	NOK3380-01	12/04/05 13:18
Toluene	ND	47.5		ug/L	50.0	95%	73 - 133	5120423	NOK3380-01	12/04/05 13:18
Ethyl tert-Butyl Ether	ND	42.7		ug/L	50.0	85%	57 - 148	5120423	NOK3380-01	12/04/05 13:18
Isopropyl Ether	ND	41.1		ug/L	50.0	82%	67 - 143	5120423	NOK3380-01	12/04/05 13:18
Xylenes, total	ND	132		ug/L	150	88%	70 - 143	5120423	NOK3380-01	12/04/05 13:18
Tertiary Butyl Alcohol	134	762		ug/L	500	126%	19 - 183	5120423	NOK3380-01	12/04/05 13:18
<i>Surrogate: 1,2-Dichloroethane-d4</i>		42.3		ug/L	50.0	85%	70 - 130	5120423	NOK3380-01	12/04/05 13:18
<i>Surrogate: Dibromofluoromethane</i>		50.0		ug/L	50.0	100%	79 - 122	5120423	NOK3380-01	12/04/05 13:18
<i>Surrogate: Toluene-d8</i>		49.5		ug/L	50.0	99%	78 - 121	5120423	NOK3380-01	12/04/05 13:18
<i>Surrogate: 4-Bromofluorobenzene</i>		55.7		ug/L	50.0	111%	78 - 126	5120423	NOK3380-01	12/04/05 13:18
<b>5120573-MS1</b>										
Tert-Amyl Methyl Ether	ND	47.0		ug/L	50.0	94%	45 - 155	5120573	NOK3298-05	12/06/05 19:54
Benzene	ND	47.0		ug/L	50.0	94%	71 - 137	5120573	NOK3298-05	12/06/05 19:54
Ethyl tert-Butyl Ether	ND	45.2		ug/L	50.0	90%	57 - 148	5120573	NOK3298-05	12/06/05 19:54
Ethylbenzene	ND	45.6		ug/L	50.0	91%	72 - 139	5120573	NOK3298-05	12/06/05 19:54
Isopropyl Ether	ND	38.8		ug/L	50.0	78%	67 - 143	5120573	NOK3298-05	12/06/05 19:54
Methyl tert-Butyl Ether	ND	41.4		ug/L	50.0	83%	55 - 152	5120573	NOK3298-05	12/06/05 19:54
Toluene	ND	50.4		ug/L	50.0	101%	73 - 133	5120573	NOK3298-05	12/06/05 19:54
Tertiary Butyl Alcohol	ND	532		ug/L	500	106%	19 - 183	5120573	NOK3298-05	12/06/05 19:54
Xylenes, total	ND	140		ug/L	150	93%	70 - 143	5120573	NOK3298-05	12/06/05 19:54
<i>Surrogate: 1,2-Dichloroethane-d4</i>		44.3		ug/L	50.0	89%	70 - 130	5120573	NOK3298-05	12/06/05 19:54
<i>Surrogate: Dibromofluoromethane</i>		51.3		ug/L	50.0	103%	79 - 122	5120573	NOK3298-05	12/06/05 19:54
<i>Surrogate: Toluene-d8</i>		50.2		ug/L	50.0	100%	78 - 121	5120573	NOK3298-05	12/06/05 19:54
<i>Surrogate: 4-Bromofluorobenzene</i>		55.9		ug/L	50.0	112%	78 - 126	5120573	NOK3298-05	12/06/05 19:54
<b>5121249-MS1</b>										
Tert-Amyl Methyl Ether	ND	43.8		ug/L	50.0	88%	45 - 155	5121249	NOK3077-07	12/05/05 14:10
1,2-Dibromoethane (EDB)	ND	45.8		ug/L	50.0	92%	71 - 138	5121249	NOK3077-07	12/05/05 14:10
Benzene	ND	43.6		ug/L	50.0	87%	71 - 137	5121249	NOK3077-07	12/05/05 14:10
1,2-Dichloroethane	2.33	35.2	M8	ug/L	50.0	66%	70 - 140	5121249	NOK3077-07	12/05/05 14:10
Ethylbenzene	ND	42.0		ug/L	50.0	84%	72 - 139	5121249	NOK3077-07	12/05/05 14:10
Ethanol	46.3	3160		ug/L	5000	62%	49 - 158	5121249	NOK3077-07	12/05/05 14:10

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

**PROJECT QUALITY CONTROL DATA**  
**Matrix Spike - Cont.**

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
<b>Volatile Organic Compounds by EPA Method 8260B</b>										
<b>5121249-MS1</b>										
Toluene	ND	45.1		ug/L	50.0	90%	73 - 133	5121249	NOK3077-07	12/05/05 14:10
Ethyl tert-Butyl Ether	ND	41.2		ug/L	50.0	82%	57 - 148	5121249	NOK3077-07	12/05/05 14:10
Isopropyl Ether	ND	38.2		ug/L	50.0	76%	67 - 143	5121249	NOK3077-07	12/05/05 14:10
Methyl tert-Butyl Ether	26.6	63.7		ug/L	50.0	74%	55 - 152	5121249	NOK3077-07	12/05/05 14:10
Xylenes, total	1.68	127		ug/L	150	84%	70 - 143	5121249	NOK3077-07	12/05/05 14:10
Tertiary Butyl Alcohol	16.4	1030	M7	ug/L	500	203%	19 - 183	5121249	NOK3077-07	12/05/05 14:10
Surrogate: 1,2-Dichloroethane-d4		45.1		ug/L	50.0	90%	70 - 130	5121249	NOK3077-07	12/05/05 14:10
Surrogate: Dibromofluoromethane		51.8		ug/L	50.0	104%	79 - 122	5121249	NOK3077-07	12/05/05 14:10
Surrogate: Toluene-d8		49.6		ug/L	50.0	99%	78 - 121	5121249	NOK3077-07	12/05/05 14:10
Surrogate: 4-Bromofluorobenzene		53.9		ug/L	50.0	108%	78 - 126	5121249	NOK3077-07	12/05/05 14:10
<b>Purgeable Petroleum Hydrocarbons</b>										
<b>5120423-MS1</b>										
Gasoline Range Organics	1030	3270		ug/L	3050	73%	60 - 140	5120423	NOK3380-01	12/04/05 13:18
Surrogate: 1,2-Dichloroethane-d4		42.3		ug/L	50.0	85%	0 - 200	5120423	NOK3380-01	12/04/05 13:18
Surrogate: Dibromofluoromethane		50.0		ug/L	50.0	100%	0 - 200	5120423	NOK3380-01	12/04/05 13:18
Surrogate: Toluene-d8		49.5		ug/L	50.0	99%	0 - 200	5120423	NOK3380-01	12/04/05 13:18
Surrogate: 4-Bromofluorobenzene		55.7		ug/L	50.0	111%	0 - 200	5120423	NOK3380-01	12/04/05 13:18
<b>5121249-MS1</b>										
Gasoline Range Organics	ND	1970		ug/L	3050	65%	60 - 140	5121249	NOK3077-07	12/05/05 14:10
Surrogate: 1,2-Dichloroethane-d4		45.1		ug/L	50.0	90%	0 - 200	5121249	NOK3077-07	12/05/05 14:10
Surrogate: Dibromofluoromethane		51.8		ug/L	50.0	104%	0 - 200	5121249	NOK3077-07	12/05/05 14:10
Surrogate: Toluene-d8		49.6		ug/L	50.0	99%	0 - 200	5121249	NOK3077-07	12/05/05 14:10
Surrogate: 4-Bromofluorobenzene		53.9		ug/L	50.0	108%	0 - 200	5121249	NOK3077-07	12/05/05 14:10

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

**PROJECT QUALITY CONTROL DATA**  
**Matrix Spike Dup**

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
<b>Oxygenates by EPA 8260B</b>												
<b>5120423-MSD1</b>												
Tert-Amyl Methyl Ether	8.88	61.8		ug/L	50.0	106%	45 - 155	13	24	5120423	NOK3380-01	12/04/05 13:40
1,2-Dibromoethane (EDB)	ND	60.4		ug/L	50.0	121%	71 - 138	16	27	5120423	NOK3380-01	12/04/05 13:40
Benzene	ND	51.9		ug/L	50.0	104%	71 - 137	14	23	5120423	NOK3380-01	12/04/05 13:40
1,2-Dichloroethane	2.02	43.3		ug/L	50.0	83%	70 - 140	18	21	5120423	NOK3380-01	12/04/05 13:40
Ethylbenzene	ND	51.4		ug/L	50.0	103%	72 - 139	19	23	5120423	NOK3380-01	12/04/05 13:40
Ethanol	82.1	5350		ug/L	5000	105%	49 - 158	23	38	5120423	NOK3380-01	12/04/05 13:40
Toluene	ND	57.5		ug/L	50.0	115%	73 - 133	19	25	5120423	NOK3380-01	12/04/05 13:40
Ethyl tert-Butyl Ether	ND	50.7		ug/L	50.0	101%	57 - 148	17	22	5120423	NOK3380-01	12/04/05 13:40
Isopropyl Ether	ND	46.3		ug/L	50.0	93%	67 - 143	12	22	5120423	NOK3380-01	12/04/05 13:40
Xylenes, total	ND	157		ug/L	150	105%	70 - 143	17	27	5120423	NOK3380-01	12/04/05 13:40
Tertiary Butyl Alcohol	134	907		ug/L	500	155%	19 - 183	17	39	5120423	NOK3380-01	12/04/05 13:40
Surrogate: 1,2-Dichloroethane-d4		42.7		ug/L	50.0	85%	70 - 130			5120423	NOK3380-01	12/04/05 13:40
Surrogate: Dibromofluoromethane		51.2		ug/L	50.0	102%	79 - 122			5120423	NOK3380-01	12/04/05 13:40
Surrogate: Toluene-d8		49.6		ug/L	50.0	99%	78 - 121			5120423	NOK3380-01	12/04/05 13:40
Surrogate: 4-Bromofluorobenzene		53.6		ug/L	50.0	107%	78 - 126			5120423	NOK3380-01	12/04/05 13:40
<b>5120573-MSD1</b>												
Tert-Amyl Methyl Ether	ND	45.2		ug/L	50.0	90%	45 - 155	4	24	5120573	NOK3298-05	12/06/05 20:16
Benzene	ND	46.5		ug/L	50.0	93%	71 - 137	1	23	5120573	NOK3298-05	12/06/05 20:16
Ethyl tert-Butyl Ether	ND	43.4		ug/L	50.0	87%	57 - 148	4	22	5120573	NOK3298-05	12/06/05 20:16
Ethylbenzene	ND	46.0		ug/L	50.0	92%	72 - 139	0.9	23	5120573	NOK3298-05	12/06/05 20:16
Isopropyl Ether	ND	36.3		ug/L	50.0	73%	67 - 143	7	22	5120573	NOK3298-05	12/06/05 20:16
Methyl tert-Butyl Ether	ND	40.8		ug/L	50.0	82%	55 - 152	1	27	5120573	NOK3298-05	12/06/05 20:16
Toluene	ND	45.9		ug/L	50.0	92%	73 - 133	9	25	5120573	NOK3298-05	12/06/05 20:16
Tertiary Butyl Alcohol	ND	593		ug/L	500	119%	19 - 183	11	39	5120573	NOK3298-05	12/06/05 20:16
Xylenes, total	ND	137		ug/L	150	91%	70 - 143	2	27	5120573	NOK3298-05	12/06/05 20:16
Surrogate: 1,2-Dichloroethane-d4		43.3		ug/L	50.0	87%	70 - 130			5120573	NOK3298-05	12/06/05 20:16
Surrogate: Dibromofluoromethane		50.7		ug/L	50.0	101%	79 - 122			5120573	NOK3298-05	12/06/05 20:16
Surrogate: Toluene-d8		50.4		ug/L	50.0	101%	78 - 121			5120573	NOK3298-05	12/06/05 20:16
Surrogate: 4-Bromofluorobenzene		54.8		ug/L	50.0	110%	78 - 126			5120573	NOK3298-05	12/06/05 20:16
<b>5121249-MSD1</b>												
Tert-Amyl Methyl Ether	ND	40.5		ug/L	50.0	81%	45 - 155	8	24	5121249	NOK3077-07	12/05/05 14:32
1,2-Dibromoethane (EDB)	ND	46.3		ug/L	50.0	93%	71 - 138	1	27	5121249	NOK3077-07	12/05/05 14:32
Benzene	ND	40.8		ug/L	50.0	82%	71 - 137	7	23	5121249	NOK3077-07	12/05/05 14:32
1,2-Dichloroethane	2.33	34.6	M8	ug/L	50.0	65%	70 - 140	2	21	5121249	NOK3077-07	12/05/05 14:32
Ethylbenzene	ND	39.9		ug/L	50.0	80%	72 - 139	5	23	5121249	NOK3077-07	12/05/05 14:32
Ethanol	46.3	3750		ug/L	5000	74%	49 - 158	17	38	5121249	NOK3077-07	12/05/05 14:32
Toluene	ND	40.1		ug/L	50.0	80%	73 - 133	12	25	5121249	NOK3077-07	12/05/05 14:32
Ethyl tert-Butyl Ether	ND	37.3		ug/L	50.0	75%	57 - 148	10	22	5121249	NOK3077-07	12/05/05 14:32
Isopropyl Ether	ND	34.4		ug/L	50.0	69%	67 - 143	10	22	5121249	NOK3077-07	12/05/05 14:32
Methyl tert-Butyl Ether	26.6	60.8		ug/L	50.0	68%	55 - 152	5	27	5121249	NOK3077-07	12/05/05 14:32

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
 270 Perkins Street  
 Sonoma, CA 95476  
 Attn Ana Friel

Work Order: NOK3314  
 Project Name: 1601 Webster Street, Alameda, CA  
 Project Number: 051122-SS1  
 Received: 11/30/05 08:00

**PROJECT QUALITY CONTROL DATA**  
**Matrix Spike Dup - Cont.**

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
<b>Volatile Organic Compounds by EPA Method 8260B</b>												
<b>5121249-MSD1</b>												
Xylenes, total	1.68	121		ug/L	150	80%	70 - 143	5	27	5121249	NOK3077-07	12/05/05 14:32
Tertiary Butyl Alcohol	16.4	558		ug/L	500	108%	19 - 183	59	39	5121249	NOK3077-07	12/05/05 14:32
Surrogate: 1,2-Dichloroethane-d4		44.2		ug/L	50.0	88%	70 - 130			5121249	NOK3077-07	12/05/05 14:32
Surrogate: Dibromofluoromethane		49.2		ug/L	50.0	98%	79 - 122			5121249	NOK3077-07	12/05/05 14:32
Surrogate: Toluene-d8		48.8		ug/L	50.0	98%	78 - 121			5121249	NOK3077-07	12/05/05 14:32
Surrogate: 4-Bromofluorobenzene		54.6		ug/L	50.0	109%	78 - 126			5121249	NOK3077-07	12/05/05 14:32
<b>Purgeable Petroleum Hydrocarbons</b>												
<b>5120423-MSD1</b>												
Gasoline Range Organics	1030	3750		ug/L	3050	89%	60 - 140	14	40	5120423	NOK3380-01	12/04/05 13:40
Surrogate: 1,2-Dichloroethane-d4		42.7		ug/L	50.0	85%	0 - 200			5120423	NOK3380-01	12/04/05 13:40
Surrogate: Dibromofluoromethane		51.2		ug/L	50.0	102%	0 - 200			5120423	NOK3380-01	12/04/05 13:40
Surrogate: Toluene-d8		49.6		ug/L	50.0	99%	0 - 200			5120423	NOK3380-01	12/04/05 13:40
Surrogate: 4-Bromofluorobenzene		53.6		ug/L	50.0	107%	0 - 200			5120423	NOK3380-01	12/04/05 13:40
<b>5121249-MSD1</b>												
Gasoline Range Organics	ND	1820		ug/L	3050	60%	60 - 140	8	40	5121249	NOK3077-07	12/05/05 14:32
Surrogate: 1,2-Dichloroethane-d4		44.2		ug/L	50.0	88%	0 - 200			5121249	NOK3077-07	12/05/05 14:32
Surrogate: Dibromofluoromethane		49.2		ug/L	50.0	98%	0 - 200			5121249	NOK3077-07	12/05/05 14:32
Surrogate: Toluene-d8		48.8		ug/L	50.0	98%	0 - 200			5121249	NOK3077-07	12/05/05 14:32
Surrogate: 4-Bromofluorobenzene		54.6		ug/L	50.0	109%	0 - 200			5121249	NOK3077-07	12/05/05 14:32

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
270 Perkins Street  
Sonoma, CA 95476  
Attn Ana Friel

Work Order: NOK3314  
Project Name: 1601 Webster Street, Alameda, CA  
Project Number: 051122-SS1  
Received: 11/30/05 08:00

### CERTIFICATION SUMMARY

#### TestAmerica Analytical - Nashville

Method	Matrix	AIHA	Nelac	California
NA	Water			
SW846 8260B	Water	N/A	X	X

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
270 Perkins Street  
Sonoma, CA 95476  
Attn Ana Friel

Work Order: NOK3314  
Project Name: 1601 Webster Street, Alameda, CA  
Project Number: 051122-SS1  
Received: 11/30/05 08:00

## NELAC CERTIFICATION SUMMARY

TestAmerica Analytical - Nashville does not hold NELAC certifications for the following analytes included in this report

<u>Method</u>	<u>Matrix</u>	<u>Analyte</u>
SW846 8260B	Water	Gasoline Range Organics

Client Cambria Environmental Tech. Sonoma/ Shell (13674)  
270 Perkins Street  
Sonoma, CA 95476  
Attn Ana Friel

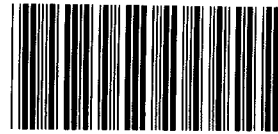
Work Order: NOK3314  
Project Name: 1601 Webster Street, Alameda, CA  
Project Number: 051122-SS1  
Received: 11/30/05 08:00

### DATA QUALIFIERS AND DEFINITIONS

- A-01** The recovery was outside the laboratory historical limits, but within the method default limits of 70-130%.
- L2** Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.
- M3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- M7** The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).
- M8** The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).

### METHOD MODIFICATION NOTES





**COOLER RECEIPT FORM**

BC#

NOK3314

Client Name :

Cooler Received/Opened On: 11/30/05 Accessioned By: Lori Farthing

Lori Farthing  
Log-in Personnel Signature

1. Temperature of Cooler when triaged: -1.5° Degrees Celsius
2. Were custody seals on outside of cooler?.....  YES...NO...NA  
 a. If yes, how many and where: 1 front
3. Were custody seals on containers?.....  NO...YES...NA
4. Were the seals intact, signed, and dated correctly?.....  YES...NO...NA
5. Were custody papers inside cooler?.....  YES...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?.....  YES...NO...NA
7. Did you sign the custody papers in the appropriate place?.....  YES...NO...NA
8. What kind of packing material used?  Bubblewrap    Peanuts    Vermiculite    Foam Insert  
 Ziplock baggies    Paper    Other    None
9. Cooling process:  Ice    Ice-pack    Ice (direct contact)    Dry ice    Other    None
10. Did all containers arrive in good condition ( unbroken)?..... YES..  NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)?.....  YES...NO...NA
12. Did all container labels and tags agree with custody papers?.....  YES...NO...NA
13. Were correct containers used for the analysis requested?.....  YES...NO...NA
14. a. Were VOA vials received?.....  YES...NO...NA  
 b. Was there any observable head space present in any VOA vial?.....  NO...YES...NA
15. Was sufficient amount of sample sent in each container?.....  YES...NO...NA
16. Were correct preservatives used?.....  YES...NO...NA

S-6 had 2 broken containers on arrival

If not, record standard ID of preservative used here \_\_\_\_\_

17. Was residual chlorine present?..... NO...YES..  NA

18. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below:

Fed-Ex    UPS    Velocity    DHL    Route    Off-street    Misc.

2148

19. If a Non-Conformance exists, see attached or comments below:

BIS = Broken in shipment  
Cooler Receipt Form

# SHELL Chain Of Custody Record

Lab Identification (if necessary):

- TA - Irvine, California
- TA - Morgan Hill, California
- TA - Nashville, Tennessee
- STL
- Other (location) \_\_\_\_\_

**Shell Project Manager to be invoiced:**

ENVIRONMENTAL SERVICES     **Denis Brown**

TECHNICAL SERVICES

CRMT HOUSTON      NOT FOR ENV. REMEDIATION - NO ETIM - SEND PAPER INVOICE

**INCIDENT NUMBER (ES ONLY)**

9 7 5 6 4 7 0 1

**SAP or CRMT NUMBER (TS/CRMT)**

DATE: 11/22/05

PAGE: 1 of 1

<b>SAMPLING COMPANY:</b> <b>Blaine Tech Services</b>	<b>LOG CODE:</b> BTSS	<b>SITE ADDRESS: Street and City</b> <b>1601 Webster St., Alameda</b>	<b>State</b> CA	<b>GLOBAL ID NO.:</b> T0600137103
<b>ADDRESS:</b> 1680 Rogers Avenue, San Jose, CA 95112		<b>EDF DELIVERABLE TO (Responsible Party or Designee):</b> Ana Friel	<b>PHONE NO.:</b> (707) 268-3812	<b>E-MAIL:</b> sonomaedf@Cambria-env.com
<b>PROJECT CONTACT (Hardcopy or PDF Report to):</b> Michael Ninokata		<b>CONSULTANT PROJECT NO.:</b> 051122-SS1		
<b>TELEPHONE:</b> 408-573-0555	<b>FAX:</b> 408-573-7771	<b>E-MAIL:</b> mninokata@blainetech.com		
<b>TURNAROUND TIME (STANDARD IS 10 CALENDAR DAYS):</b> <input checked="" type="checkbox"/> STD <input type="checkbox"/> 5 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 24 HOURS <input type="checkbox"/> RESULTS NEEDED ON WEEKEND		<b>REQUESTED ANALYSIS</b>		
<input type="checkbox"/> LA - RWQCB REPORT FORMAT <input type="checkbox"/> UST AGENCY: _____		<b>FIELD NOTES:</b> Container/Preservative or PID Readings or Laboratory Notes  _____ _____ _____		
<b>SPECIAL INSTRUCTIONS OR NOTES:</b> CHECK BOX IF EDD IS NOT NEEDED <input type="checkbox"/>				

**RECEIPT VERIFICATION REQUESTED**

**LAB USE ONLY**     Fi     12/07/05 17:00     1

**NOK3314**

LAB USE ONLY	DATE	TIME	MATRIX	NO. OF CONT.	TPH - Purgeable (8260B)	TPH - Extractable (8015M)	BTEX (8260B)	5 Oxygenates (8260B)	MTBE (8260B)	TBA (8260B)	DIPN (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TEMPERATURE ON RECEIPT °C
			GW	3	X	X	X							X	X	X		NOK3314-01
		1140			X	X	X											-02
		1150			X	X	X											-03
		1202			X	X	X											-04
		1210			X	X	X											-05
		915			X	X	X											-06
		1045			X	X	X											-07

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <u>11/22/05</u>	Time: <u>1350</u>
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <u>11/23/05</u>	Time: <u>1040</u>
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <u>11/23/05</u>	Time: <u>1108</u>

O&C Graphic (7-14) 896-9702

## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Shell  
 REC. BY (PRINT): ME  
 WORKORDER: \_\_\_\_\_

DATE REC'D AT LAB: 11.23.05  
 TIME REC'D AT LAB: 11:08  
 DATE LOGGED IN: \_\_\_\_\_

For Regulatory Purposes?  
 DRINKING WATER YES/NO  
 WASTE WATER YES/NO

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present <input checked="" type="checkbox"/> Absent <input type="checkbox"/> Intact / Broken*			TBW-N	3-V04	HCL	-	L	11/22/05	
2. Chain-of-Custody Present <input checked="" type="checkbox"/> / Absent* <input type="checkbox"/>			S-2	↓	↓	↓	↓	↓	
3. Traffic Reports or Packing List: Present <input checked="" type="checkbox"/> / Absent <input type="checkbox"/>			3	↓	↓	↓	↓	↓	
4. Airbill: Airbill / Sticker Present <input checked="" type="checkbox"/> / Absent <input type="checkbox"/>			4	↓	↓	↓	↓	↓	
5. Airbill #:			5	↓	↓	↓	↓	↓	
6. Sample Labels: Present <input checked="" type="checkbox"/> / Absent <input type="checkbox"/>			6	↓	↓	↓	↓	↓	
7. Sample IDs: Listed <input checked="" type="checkbox"/> / Not Listed <input type="checkbox"/> on Chain-of-Custody			7	↓	↓	↓	↓	↓	
8. Sample Condition: Intact / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes <input checked="" type="checkbox"/> / No* <input type="checkbox"/>									
10. Sample received within hold time? Yes <input checked="" type="checkbox"/> / No* <input type="checkbox"/>									
11. Adequate sample volume received? Yes <input checked="" type="checkbox"/> / No* <input type="checkbox"/>									
12. Proper preservatives used? Yes <input checked="" type="checkbox"/> / No* <input type="checkbox"/>									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes <input type="checkbox"/> / No* <input checked="" type="checkbox"/>									
14. Read Temp: <u>2.5</u> Corrected Temp: <u>2.5</u> Is corrected temp 4 +/-2°C? Yes <input checked="" type="checkbox"/> / No** <input type="checkbox"/>									

ME 11.23.05

\*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.















## WELL GAUGING DATA

Project # 051122-SS1 Date 11/22/05 Client 97564701

Site 1601 Weber St. Alameda

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
1BW-N	4					5.82	10.60	↓
S-2	4					7.70	11.70	
S-3	4					7.15	11.70	
S-4	4					6.10	11.35	
S-5	4					6.44	11.35	
S-6	4					6.53	10.64	
* S-7	4					6.88	10.91	
* WELL NOT LABELED PROPERLY ON SITE. LABELED @ S-1.								



## SHELL WELL MONITORING DATA SHEET

BTS #: <u>051122-551</u>	Site: <u>97564701</u>
Sampler: <u>Goodt</u>	Date: <u>11/22/05</u>
Well I.D.: <u>5.2</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>11.70</u>	Depth to Water (DTW): <u>7.70</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>8.50</u>	

Purge Method:  Bailer       Waterra      Sampling Method:  Bailer  
 Disposable Bailer       Peristaltic       Disposable Bailer  
 Positive Air Displacement       Extraction Pump       Extraction Port  
 Electric Submersible       Other \_\_\_\_\_       Dedicated Tubing  
 Other: \_\_\_\_\_

$\underline{2.6} \text{ (Gals.)} \times \underline{3} = \underline{7.8} \text{ Gals.}$ I Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
<u>932</u>	<u>72.7</u>	<u>7.5</u>	<u>1179</u>	<u>31</u>	<u>2.6</u>	<u>clear</u>
	<u>well dewatered @ 3 gal.</u>					<u>DTW = 9.83</u>
<u>1140</u>	<u>70.8</u>	<u>7.5</u>	<u>1183</u>	<u>45</u>	<u>—</u>	<u>clear</u>

Did well dewater?  Yes    No      Gallons actually evacuated: 3

Sampling Date: 11/22/05    Sampling Time: 1140    Depth to Water: 7.74

Sample I.D.: 5.2      Laboratory: STL    Other: TA

Analyzed for:  TPH-G     BTEX    MTBE    TPH-D    Other: oxy's (S) by 8260

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV







## SHELL WELL MONITORING DATA SHEET

BTS #: <u>051122-SS1</u>	Site: <u>92504701</u>
Sampler: <u>500ch</u>	Date: <u>11/22/05</u>
Well I.D.: <u>S-6</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth (TD): <u>10.64</u>	Depth to Water (DTW): <u>6.53</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~ ~~Disposable Bailer~~ ~~Positive Air Displacement~~ ~~Electric Submersible~~ Water Peristaltic Extraction Pump Other

Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing

Other: \_\_\_\_\_

GRAB (Gals.) X \_\_\_\_\_ = \_\_\_\_\_ Gals.  
 I Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>915</u>	<u>71.4</u>	<u>7.6</u>	<u>1500</u>	<u>11</u>	<u>—————</u>	<u>clear</u>
<u>* GRAB SAMPLE DUE TO DAMAGED CASING.</u>						

Did well dewater? Yes ~~No~~ Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 11/22/05 Sampling Time: 915 Depth to Water: \_\_\_\_\_

Sample I.D.: S-6 Laboratory: STL Other TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: OXY'S BY 8260

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV





## WELL GAUGING DATA

Project # 051114-MD1 Date 11/14/05 Client ghc/l

Site 1601 webster st, Alameda

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
S-1	4					6.76	10.91	↓
S-2	4					7.60	11.65	
S-3	4					7.01	11.66	
S-4	4					6.00	11.32	
S-5	4					6.33	11.30	
S-6	4					6.36	10.80	

# WELL DEVELOPMENT DATA SHEET

Project #: <u>05114-M01</u>	Client: <u>97564701</u>
Developer: <u>MW</u>	Date Developed: <u>11/14/05</u>
Well I.D. <u>S-2</u>	Well Diameter: (circle one) 2 3 <u>4</u> 6
Total Well Depth: Before <u>11.65</u> After <u>11.69</u>	Depth to Water: Before <u>7.60</u> After <u>10.91</u>
Reason not developed:	If Free Product, thickness:

Additional Notations: Surged well for 15min prior to purging

Volume Conversion Factor (VCF): (12 x (d <sup>2</sup> /4) x π) / 231	Well dia.	VCF
where	2" =	0.16
12 = in / foot	3" =	0.37
d = diameter (in.)	<u>4" =</u>	0.65
π = 3.1416	6" =	1.47
231 = in <sup>3</sup> /gal	10" =	4.08
	12" =	6.87

<u>2.6</u>	X	<u>10</u>	=	<u>26</u>
1 Case Volume		Specified Volumes		gallons

Purging Device:

- Bailer                       Electric Submersible  
 Suction Pump               Positive Air Displacement

Type of Installed Pump

Other equipment used 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or <u>µS</u> )	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
						Began purging using Telson Bailer
1003	72.4	6.9	1800	7000	2.6	hard Bottom, turbid
1008	72.8	6.7	1610	71000	5.2	turbid, Brown
1011	73.5	6.6	1509	71000	7.8	↓ ↓
						well dewatered @ 7.8 DTW = 10.78 <sup>1252</sup> prev 7.60
						Surged for 10 min before purging
1259	72.6	6.8	1270	7000	10.4	tan, turbid
1305	73.2	6.6	1202	7000	13	tan, turbid
1310	73.1	6.0	1091	7000	15.6	well dewatered DTW = 11.00
1520	72.6	6.5	991	71000	18.2	Surged 10 min before purging
1525	72.9	6.6	1001	71000	20.8	cloudy, tan
1533	72.7	5.5	957	71000	23.4	cloudy, tan
1543	74.7	5.4	920	7000	26	cloudy, tan
Did Well Dewater? <input checked="" type="checkbox"/>		If yes, note above.		Gallons Actually Evacuated: <u>26</u>		

checked calibration after well & calibration was off - pH 4 = 2.1 - meter not functioning recalibrated @ next well

# WELL DEVELOPMENT DATA SHEET

Project #: <u>051114-MD1</u>	Client: <u>97564701</u>
Developer: <u>MD</u>	Date Developed: <u>11/14/05</u>
Well I.D. <u>5-3</u>	Well Diameter: (circle one) 2 3 <u>4</u> 6
Total Well Depth: Before <u>11.66</u> After <u>11.66</u>	Depth to Water: Before <u>7.01</u> After <u>11.01</u>
Reason not developed:	If Free Product, thickness:
Additional Notations: <u>Surged for 15 min prior to purging</u>	

Volume Conversion Factor (VCF):  
(12 x (d<sup>2</sup>/4) x π) / 231

where  
12 = in / foot  
d = diameter (in.)  
π = 3.1416  
231 = in<sup>3</sup>/gal

Well dia.	VCF
2"	0.16
3"	0.37
<u>4"</u>	0.65
6"	1.47
10"	4.08
12"	6.87

<u>3</u>	X	<u>10</u>	=	<u>30</u>	gallons
1 Case Volume		Specified Volumes			

Purging Device:

- Bailer                       Electric Submersible  
 Suction Pump               Positive Air Displacement

Type of Installed Pump

Other equipment used 4" surge block

TIME	TEMP (F)	pH	Cond. (mS or μSD)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
						<u>Started purge using 4" Bailer</u>
<u>0931</u>	<u>68.9</u>	<u>6.9</u>	<u>1084</u>	<u>&gt;1000</u>	<u>3</u>	<u>cloudy, hard Bottom</u>
<u>0935</u>	<u>69.7</u>	<u>6.9</u>	<u>1141</u>	<u>7000</u>	<u>6</u>	<u>cloudy, tan</u>
<u>0940</u>	<u>69.9</u>	<u>7.0</u>	<u>1368</u>	<u>7000</u>	<u>9</u>	<u>cloudy, tan</u>
						<u>Well Dewatered @ 10 gal DTW = 10.75 1223 DM = 7.02</u>
<u>1234</u>	<u>70.6</u>	<u>6.6</u>	<u>1232</u>	<u>7000</u>	<u>12</u>	<u>cloudy, tan, surged well</u>
<u>1238</u>	<u>70.5</u>	<u>6.6</u>	<u>1111</u>	<u>71000</u>	<u>15</u>	<u>↓ ↓ Surged well prior to purging</u>
<u>1242</u>	<u>70.2</u>	<u>6.5</u>	<u>1052</u>	<u>7000</u>	<u>18</u>	<u>↓ ↓ 1430</u>
						<u>Well dewatered @ 19 DTW = 10.63 DTW = 7.05</u>
<u>1442</u>	<u>71.3</u>	<u>6.5</u>	<u>957</u>	<u>7000</u>	<u>21</u>	<u>Surged well prior to purge</u>
<u>1477</u>	<u>70.8</u>	<u>6.9</u>	<u>841</u>	<u>71000</u>	<u>24</u>	<u>cloudy, tan</u>
<u>1451</u>	<u>70.3</u>	<u>7.0</u>	<u>831</u>	<u>71000</u>	<u>27</u>	<u>↓ ↓</u>
<u>1502</u>	<u>69.9</u>	<u>7.0</u>	<u>802</u>	<u>71000</u>	<u>30</u>	<u>↓ ↓</u>
Did Well Dewater? <u>Yes</u>	If yes, note above.			Gallons Actually Evacuated: <u>30</u>		



# WELL DEVELOPMENT DATA SHEET

Project #: <u>05114-MW1</u>	Client: <u>97564701</u>
Developer: <u>MD</u>	Date Developed: <u>11/19/08</u>
Well I.D. <u>S-5</u>	Well Diameter: (circle one) 2 3 <u>4</u> 6
Total Well Depth: Before <u>11.30</u> After <u>11.31</u>	Depth to Water: Before <u>6.33</u> After <u>10.99</u>
Reason not developed:	If Free Product, thickness:
Additional Notations: <u>Surged well for 15 min prior to purging</u>	

Volume Conversion Factor (VCF):  
 $(12 \times (d^2/4) \times \pi) / 231$   
 where  
 12 = in / foot  
 d = diameter (in.)  
 $\pi = 3.1416$   
 231 = in<sup>3</sup>/gal

Well dia.	VCF
2"	0.16
3"	0.37
<u>4"</u>	0.65
6"	1.47
10"	4.08
12"	6.87

<u>3.2</u>	<u>X</u>	<u>10</u>	<u>=</u>	<u>32</u>	gallons
1 Case Volume		Specified Volumes			

Purging Device:

- Bailer  
 Electric Submersible  
 Suction Pump  
 Positive Air Displacement

Type of Installed Pump

Other equipment used 4" surge block

TIME	TEMP (F)	pH	Cond. (mS or <u>uS</u> )	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
		<u>started</u>	<u>surge</u>	<u>using</u>	<u>taction Bailer</u>	
1034	70.5	7.3	1013	7100	3.2	cloudy, hard Bottom, fan
1039	71.1	7.1	973	7000	6.4	cloudy, less turbid
1047	70.0	7.0	999	970	9.6	cloudy, turbid
		<u>well dewatered</u>	<u>10</u>			<u>DTW=10.2   1310 DTW=6.33</u>
1324	70.6	<u>6.4</u>	881	930	12.8	cloudy odor
1329	71.1	6.9	807	71000	16	↓ ↓ ↓
1334	70.7	6.9	769	581	19.2	well dewatered DTW=10.40
		<u>Surged well ~10 min prior to purging</u>				<u>DTW=6.38</u>
<u>1559</u>	71.0	<u>6.8</u>	689	488	22.4	cloudy, tan odor
1629	69.0	6.9	674	420	25.6	↓ ↓ ↓
1633	70.6	6.8	652	328	28.8	↓ ↓ ↓
		<u>well dewatered</u>	<u>20</u>		<u>28.8</u>	
Did Well Dewater? <u>Yes</u> If yes, note above.			Gallons Actually Evacuated: <u>28.8</u>			

\* Re calibrate pH



# WELL DEVELOPMENT DATA SHEET

Project #: <u>05114-MD1</u>	Client: <u>97564701</u>
Developer: <u>MD</u>	Date Developed: <u>11/14/05</u>
Well I.D. <u>5"</u>	Well Diameter: (circle one) 2 3 <u>(4)</u> 6
Total Well Depth: Before <u>10.91</u> After <u>10.91</u>	Depth to Water: Before <u>6.76</u> After <u>10.22</u>
Reason not developed:	If Free Product, thickness:
Additional Notations: <u>Sarged well for 15 min prior to purging</u>	

Volume Conversion Factor (VCF):  
 $(12 \times (d^2/4) \times \pi) / 231$   
 where  
 12 = in / foot  
 d = diameter (in.)  
 $\pi = 3.1416$   
 231 = in<sup>3</sup>/gal

Well dia.	VCF
2"	0.16
3"	0.37
<u>4"</u>	0.65
6"	1.47
10"	4.08
12"	6.87

<u>2.7</u>	X	<u>10</u>	=	<u>27</u>
1 Case Volume		Specified Volumes		gallons

Purging Device:

- Bailer  
 Electric Submersible  
 Suction Pump  
 Positive Air Displacement

Type of Installed Pump

Other equipment used 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or $\mu$ S)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
						<u>Began purging using suction Bailer</u>
<u>1154</u>	<u>75.1</u>	<u>6.8</u>	<u>2199</u>	<u>7000</u>	<u>2.7</u>	<u>cloudy, hard bottom</u>
<u>1158</u>	<u>75.2</u>	<u>6.8</u>	<u>2178</u>	<u>7000</u>	<u>5.4</u>	<u>cloudy, fan odor</u>
<u>1205</u>	<u>74.3</u>	<u>6.8</u>	<u>2193</u>	<u>71000</u>	<u>8.1</u>	<u>less turbid cloudy DTW: 10.32</u>
						<u>well dewatered @ 8.1</u>
						<u>Sarged well for 10 min prior to purging 1401 DTW=6.80</u>
<u>1414</u>	<u>75.5</u>	<u>6.8</u>	<u>2020</u>	<u>71000</u>	<u>10.8</u>	<u>odor, cloudy</u>
<u>1420</u>	<u>75.5</u>	<u>6.2</u>	<u>1825</u>	<u>71000</u>	<u>13.5</u>	<u>odor, cloudy 10.40</u>
						<u>well dewatered @ 13.5 DTW=10.11 DTW=6.80</u>
						<u>re-sarged well for ~10 min then purg</u>
<u>1657</u>	<u>73.0</u>	<u>6.6</u>	<u>1648</u>	<u>7000</u>	<u>16.2</u>	<u>cloudy odor</u>
<u>1702</u>	<u>74.1</u>	<u>6.6</u>	<u>1640</u>	<u>7000</u>	<u>18.9</u>	<u>4</u>
						<u>well dewatered @ 19</u>
Did Well Dewater? <u>Yes</u> if yes, note above.				Gallons Actually Evacuated:		<u>19</u>











**Appendix G**

**Groundwater Monitoring Data –  
Former 76 Station #0843,  
1629 Webster Street**

**Table 1**  
**CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 23, 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-1</b>		<b>(Screen Interval in feet: 4.5-20.5)</b>												
11/23/05	16.18	7.28	0.00	8.90	-0.76	--	--	--	--	--	--	--	--	Sampled annually
<b>MW-2A</b>		<b>(Screen Interval in feet: 5-11.5)</b>												
11/23/05	15.56	6.88	0.00	8.68	-0.72	--	120	1.3	2.8	7.8	30	--	10	
<b>MW-3</b>		<b>(Screen Interval in feet: 5.0-20.0)</b>												
11/23/05	15.11	6.60	0.00	8.51	-0.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-4</b>		<b>(Screen Interval in feet: 5.0-20.5)</b>												
11/23/05	15.17	6.59	0.00	8.58	-0.85	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	23	
<b>MW-5</b>		<b>(Screen Interval in feet: 5-20)</b>												
11/23/05	13.34	5.86	0.00	7.48	-0.55	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-6</b>		<b>(Screen Interval in feet: 5-20)</b>												
11/23/05	14.08	6.01	0.00	8.07	-0.53	--	590	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1700	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
MW-1	(Screen Interval in feet: 4.5-20.5)													
3/5/99	16.18	--	--	--	--	86.6	--	ND	2.04	ND	4.06	--	23.9	
6/3/99	16.18	6.24	0.00	9.94	--	ND	--	ND	ND	ND	ND	ND	ND	
9/2/99	16.18	7.19	0.00	8.99	-0.95	ND	--	ND	ND	ND	ND	ND	ND	
12/14/99	16.18	8.07	0.00	8.11	-0.88	ND	--	ND	ND	ND	ND	ND	--	
3/14/00	16.18	5.47	0.00	10.71	2.60	ND	--	ND	ND	ND	ND	ND	--	
5/31/00	16.18	6.22	0.00	9.96	-0.75	ND	--	ND	ND	ND	ND	ND	--	
8/29/00	16.18	6.82	0.00	9.36	-0.60	ND	--	ND	ND	ND	ND	ND	--	
12/1/00	16.18	7.54	0.00	8.64	-0.72	ND	--	ND	ND	ND	ND	ND	--	
3/17/01	16.18	5.73	0.00	10.45	1.81	ND	--	ND	ND	ND	ND	ND	--	
5/23/01	16.18	6.43	0.00	9.75	-0.70	ND	--	ND	ND	ND	ND	ND	--	
9/24/01	16.18	7.12	0.00	9.06	-0.69	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/01	16.18	6.89	0.00	9.29	0.23	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
3/11/02	16.18	5.61	0.00	10.57	1.28	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/02	16.18	5.71	0.00	10.47	-0.10	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
9/3/02	16.18	--	--	--	--	--	--	--	--	--	--	--	--	Not monitored/sampled
12/12/02	16.18	7.80	0.00	8.38	--	--	--	--	--	--	--	--	--	No longer sampled
3/13/03	16.18	5.94	0.00	10.24	1.86	--	--	--	--	--	--	--	--	
6/12/03	16.18	6.10	0.00	10.08	-0.16	--	--	--	--	--	--	--	--	
9/12/03	16.18	6.65	0.00	9.53	-0.55	--	--	--	--	--	--	--	--	
12/31/03	16.18	5.74	0.00	10.44	0.91	--	--	--	--	--	--	--	--	Monitored Only
2/12/04	16.18	6.02	0.00	10.16	-0.28	--	--	--	--	--	--	--	--	Monitored Only
6/7/04	16.18	6.61	0.00	9.57	-0.59	--	--	--	--	--	--	--	--	Monitored Only
9/17/04	16.18	7.58	0.00	8.60	-0.97	--	--	--	--	--	--	--	--	Sampled Annually
12/11/04	16.18	6.49	0.00	9.69	1.09	--	--	--	--	--	--	--	--	Sampled Annually

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-1 continued</b>														
3/15/05	16.18	5.28	0.00	10.90	1.21	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	27	
5/17/05	16.18	5.83	0.00	10.35	-0.55	--	--	--	--	--	--	--	--	Sampled annually
7/27/05	16.18	6.52	0.00	9.66	-0.69	--	--	--	--	--	--	--	--	Sampled Annually
11/23/05	16.18	7.28	0.00	8.90	-0.76	--	--	--	--	--	--	--	--	Sampled annually
<b>MW-2 (Screen Interval in feet: 4.5-20.5)</b>														
3/5/99	15.57	--	0.00	--	--	34400	--	2070	7710	2340	8240	--	8460	
6/3/99	15.57	5.96	0.00	9.61	--	51200	--	1820	7570	2510	7320	6460	8800	
9/2/99	15.57	6.85	0.00	8.72	-0.89	17000	--	1000	3100	1400	3700	4000	3720	
12/14/99	15.57	7.65	0.00	7.92	-0.80	83000	--	3000	22000	4500	17000	9100	11000	
3/14/00	15.57	5.26	0.00	10.31	2.39	31000	--	1600	4600	2300	7300	5700	8700	
5/31/00	15.57	5.60	0.00	9.97	-0.34	9970	--	598	1030	487	2060	2500	1670	
8/29/00	15.57	6.35	0.00	9.22	-0.75	7900	--	390	1500	280	1900	1800	1300	
12/1/00	15.57	7.06	0.00	8.51	-0.71	87500	--	1860	17400	5590	19400	6220	3790	
3/17/01	15.57	5.98	0.00	9.59	1.08	4310	--	371	59.0	280	682	321	433	
5/23/01	15.57	6.97	0.00	8.60	-0.99	45400	--	374	4490	2790	10900	ND	406	
9/24/01	15.57	7.56	0.00	8.01	-0.59	76000	--	430	13000	4700	18000	ND<2000	480	
12/10/01	15.57	6.52	0.00	9.05	1.04	82000	--	320	9100	4400	16000	ND<2500	270	
3/11/02	15.57	5.51	0.00	10.06	1.01	14000	--	75	1400	1100	3600	ND<250	150	
6/7/02	15.57	5.73	0.00	9.84	-0.22	14000	--	120	1200	1400	4700	540	200	
9/3/02	15.57	6.81	0.00	8.76	-1.08	10000	--	150	1200	610	2800	510	460	
12/12/02	15.57	--	--	--	--	--	--	--	--	--	--	--	--	Destroyed, replaced with MW-2A
<b>MW-2a (Screen Interval in feet: 5-11.5)</b>														
12/12/02	15.56	7.45	0.00	8.11	--	3400	--	80	260	210	1000	380	400	



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-2a continued</b>														
3/13/03	--	5.85	0.00	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	1.8	2.4	2.4	
6/12/03	--	6.08	0.00	--	--	ND<50	--	0.59	0.69	ND<0.50	1.2	6.0	4.7	
9/12/03	15.56	6.54	0.00	9.02	--	--	120	1.8	4.2	6.1	20	--	6.6	
12/31/03	15.56	5.63	0.00	9.93	0.91	88	--	0.79	1.8	3.6	14	ND<5.0	2.9	
2/12/04	15.56	5.68	0.00	9.88	-0.05	160	--	2.6	4.8	13	48	7.2	7.9	
6/7/04	15.56	6.21	0.00	9.35	-0.53	94	--	0.80	1.2	2.1	9.1	4.5	3.7	
9/17/04	15.56	7.16	0.00	8.40	-0.95	--	230	3.5	6.1	13	41	--	83	
12/11/04	15.56	5.84	0.00	9.72	1.32	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.2	
3/15/05	15.56	5.52	0.00	10.04	0.32	--	92	0.84	1.7	2.4	9.8	--	ND<10	
5/17/05	15.56	5.55	0.00	10.01	-0.03	--	54	2.1	1.7	1.9	7.0	--	2.9	
7/27/05	15.56	6.16	0.00	9.40	-0.61	--	ND<50	0.66	1.1	1.3	4.2	--	3.7	
11/23/05	15.56	6.88	0.00	8.68	-0.72	--	120	1.3	2.8	7.8	30	--	10	
<b>MW-3 (Screen Interval in feet: 5.0-20.0)</b>														
3/5/99	15.11	--	0.00	--	--	135	--	ND	ND	ND	4.84	--	2.46	
6/3/99	15.11	5.57	0.00	9.54	--	ND	--	ND	ND	ND	ND	5.23	12.7	
9/2/99	15.11	6.50	0.00	8.61	-0.93	ND	--	ND	ND	ND	ND	13	11	
12/14/99	15.11	7.28	0.00	7.83	-0.78	ND	--	ND	ND	ND	ND	ND	--	
3/14/00	15.11	4.87	0.00	10.24	2.41	ND	--	ND	ND	ND	ND	7.2	6.3	
5/31/00	15.11	5.58	0.00	9.53	-0.71	ND	--	ND	ND	ND	ND	ND	--	
8/29/00	15.11	6.06	0.00	9.05	-0.48	ND	--	ND	ND	ND	ND	ND	ND	
12/1/00	15.11	6.76	0.00	8.35	-0.70	ND	--	ND	ND	ND	ND	ND	--	
3/17/01	15.11	5.09	0.00	10.02	1.67	ND	--	ND	ND	ND	ND	ND	--	
5/23/01	15.11	5.72	0.00	9.39	-0.63	ND	--	ND	ND	ND	ND	ND	--	
9/24/01	15.11	6.34	0.00	8.77	-0.62	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-3 continued</b>														
12/10/01	15.11	6.31	0.00	8.80	0.03	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
3/11/02	15.11	5.15	0.00	9.96	1.16	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/02	15.11	5.45	0.00	9.66	-0.30	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
12/12/02	15.11	7.15	0.00	7.96	-1.70	--	--	--	--	--	--	--	--	No longer sampled
3/13/03	15.11	5.37	0.00	9.74	1.78	--	--	--	--	--	--	--	--	
6/12/03	15.11	5.51	0.00	9.60	-0.14	--	--	--	--	--	--	--	--	
9/12/03	15.11	6.03	0.00	9.08	-0.52	--	--	--	--	--	--	--	--	
12/31/03	15.11	5.62	0.00	9.49	0.41	--	--	--	--	--	--	--	--	Monitored Only
2/12/04	15.11	5.51	0.00	9.60	0.11	--	--	--	--	--	--	--	--	Monitored Only
6/7/04	15.11	5.92	0.00	9.19	-0.41	--	--	--	--	--	--	--	--	Monitored Only
9/17/04	15.11	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate
12/11/04	15.11	5.94	0.00	9.17	--	--	--	--	--	--	--	--	--	Sampled Annually
3/11/05	15.11	4.76	0.00	10.35	1.18	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/17/05	15.11	5.23	0.00	9.88	-0.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/27/05	15.11	5.81	0.00	9.30	-0.58	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/23/05	15.11	6.60	0.00	8.51	-0.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-4 (Screen Interval in feet: 5.0-20.5)</b>														
3/5/99	15.17	--	0.00	--	--	ND	--	ND	ND	ND	2.44	--	25.2	
6/3/99	15.17	5.45	0.00	9.72	--	ND	--	ND	ND	ND	ND	ND	3.96	
9/2/99	15.17	6.48	0.00	8.69	-1.03	ND	--	ND	ND	ND	ND	23	27	
12/14/99	15.17	7.27	0.00	7.90	-0.79	ND	--	ND	ND	ND	ND	200	270	
3/14/00	15.17	4.67	0.00	10.50	2.60	ND	--	ND	ND	ND	ND	46	49	
5/31/00	15.17	5.48	0.00	9.69	-0.81	ND	--	ND	ND	ND	ND	ND	--	
8/29/00	15.17	6.10	0.00	9.07	-0.62	ND	--	ND	ND	ND	ND	6.1	3.2	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-4 continued</b>														
12/1/00	15.17	6.79	0.00	8.38	-0.69	ND	--	ND	ND	ND	ND	152	101	
3/17/01	15.17	5.01	0.00	10.16	1.78	ND	--	ND	ND	ND	ND	ND	--	
5/23/01	15.17	5.78	0.00	9.39	-0.77	ND	--	ND	ND	ND	ND	ND	--	
9/24/01	15.17	6.42	0.00	8.75	-0.64	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/01	15.17	6.41	0.00	8.76	0.01	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1700	1300	
3/11/02	15.17	5.05	0.00	10.12	1.36	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/02	15.17	5.42	0.00	9.75	-0.37	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
9/3/02	15.17	6.50	0.00	8.67	-1.08	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
12/12/02	15.17	7.18	0.00	7.99	-0.68	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.9	3.3	
3/13/03	15.17	5.42	0.00	9.75	1.76	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
6/12/03	15.17	5.60	0.00	9.57	-0.18	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
9/12/03	15.17	6.07	0.00	9.10	-0.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
12/31/03	15.17	5.63	0.00	9.54	0.44	750	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	790	--	
2/12/04	15.17	5.26	0.00	9.91	0.37	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/04	15.17	5.82	0.00	9.35	-0.56	ND<50	--	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1	--	
9/17/04	15.17	6.86	0.00	8.31	-1.04	--	56	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	10	
12/11/04	15.17	6.01	0.00	9.16	0.85	--	350	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	380	
3/11/05	15.17	4.61	0.00	10.56	1.40	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/17/05	15.17	4.93	0.00	10.24	-0.32	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/27/05	15.17	5.74	0.00	9.43	-0.81	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/23/05	15.17	6.59	0.00	8.58	-0.85	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	23	
<b>MW-5 (Screen Interval in feet: 5-20)</b>														
12/14/99	13.34	6.45	0.00	6.89	--	ND	--	ND	ND	ND	ND	3.5	3.8	
3/14/00	13.34	4.46	0.00	8.88	1.99	ND	--	ND	ND	ND	ND	ND	--	

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**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-5 continued</b>														
5/31/00	13.34	5.18	0.00	8.16	-0.72	ND	--	ND	ND	ND	ND	ND	--	
8/29/00	13.34	5.46	0.00	7.88	-0.28	ND	--	ND	ND	ND	ND	ND	--	
12/1/00	13.34	5.95	0.00	7.39	-0.49	ND	--	ND	ND	ND	ND	ND	--	
3/17/01	13.34	5.36	0.00	7.98	0.59	ND	--	ND	ND	ND	ND	ND	--	
5/23/01	13.34	5.09	0.00	8.25	0.27	ND	--	ND	ND	ND	ND	ND	--	
9/24/01	13.34	5.58	0.00	7.76	-0.49	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/01	13.34	5.51	0.00	7.83	0.07	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
3/11/02	13.34	4.70	0.00	8.64	0.81	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/02	13.34	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - paved over
9/3/02	13.34	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - paved over
12/12/02	13.34	6.42	0.00	6.92	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
3/13/03	13.34	5.12	0.00	8.22	1.30	ND<50	--	ND<0.50	0.54	ND<0.50	ND<0.50	ND<2.0	--	
6/12/03	13.34	5.24	0.00	8.10	-0.12	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
9/12/03	13.34	5.53	0.00	7.81	-0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
12/31/03	13.34	5.11	0.00	8.23	0.42	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
2/12/04	13.34	5.02	0.00	8.32	0.09	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/04	13.34	5.35	0.00	7.99	-0.33	ND<50	--	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1	--	
9/17/04	13.34	6.10	0.00	7.24	-0.75	--	--	--	--	--	--	--	--	Sampled Annually
12/11/04	13.34	5.53	0.00	7.81	0.57	--	--	--	--	--	--	--	--	Sampled Annually
3/11/05	13.34	4.96	0.00	8.38	0.57	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/17/05	13.34	5.04	0.00	8.30	-0.08	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/27/05	13.34	5.31	0.00	8.03	-0.27	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/23/05	13.34	5.86	0.00	7.48	-0.55	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

**MW-6 (Screen Interval in feet: 5-20)**

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-6 continued</b>														
12/14/99	14.08	6.64	0.00	7.44	--	ND	--	ND	ND	ND	ND	11000	18000	
3/14/00	14.08	4.72	0.00	9.36	1.92	ND	--	ND	ND	ND	ND	19000	21000	
5/31/00	14.08	5.28	0.00	8.80	-0.56	ND	--	ND	ND	ND	ND	13200	--	
8/29/00	14.08	5.39	0.00	8.69	-0.11	ND	--	ND	ND	ND	ND	270	400	
12/1/00	14.08	6.11	0.00	7.97	-0.72	ND	--	ND	ND	ND	ND	6330	3640	
3/17/01	14.08	6.02	0.00	8.06	0.09	18700	--	2950	989	1040	3000	10200	11500	
5/23/01	14.08	5.82	0.00	8.26	0.20	ND	--	ND	ND	ND	ND	4660	--	
9/24/01	14.08	6.59	0.00	7.49	-0.77	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	160	190	
12/10/01	14.08	6.50	0.00	7.58	0.09	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3200	2400	
3/11/02	14.08	4.81	0.00	9.27	1.69	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	92	120	
6/7/02	14.08	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - paved over
9/3/02	14.08	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - paved over
12/12/02	14.08	6.51	0.00	7.57	--	590	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1500	6200	
3/13/03	14.08	5.20	0.00	8.88	1.31	1600	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	4900	4100	
D 3/13/03	14.08	5.20	0.00	8.88	1.31	--	--	--	--	--	--	--	5100	
6/12/03	14.08	5.38	0.00	8.70	-0.18	1600	--	ND<10	ND<10	ND<10	ND<10	5200	3700	
9/12/03	14.08	6.29	0.00	7.79	-0.91	--	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	310	
12/31/03	14.08	5.38	0.00	8.70	0.91	3300	--	ND<25	ND<25	ND<25	ND<25	3800	--	
2/12/04	14.08	5.06	0.00	9.02	0.32	1100	--	ND<10	ND<10	ND<10	ND<10	1900	2800	
6/7/04	14.08	5.45	0.00	8.63	-0.39	2500	--	ND<3	ND<3	ND<3	ND<6	3200	2900	
9/17/04	14.08	6.20	0.00	7.88	-0.75	--	1300	ND<10	ND<10	ND<10	ND<20	--	2000	
12/11/04	14.08	5.60	0.00	8.48	0.60	--	1800	ND<10	ND<10	ND<10	ND<20	--	2700	
3/11/05	14.08	4.71	0.00	9.37	0.89	--	ND<1000	ND<10	ND<10	ND<10	ND<20	--	2500	
5/17/05	14.08	4.98	0.00	9.10	-0.27	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2200	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-6 continued</b>														
7/27/05	14.08	5.48	0.00	8.60	-0.50	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1100	
11/23/05	14.08	6.01	0.00	8.07	-0.53	--	590	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1700	

**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	EDC	EDB	TAME 8260B	TBA 8260B	DIPE 8260B	ETBE 8260B	Ethanol 8260B
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
<b>MW-1</b>							
9/2/99	--	--	ND	ND	ND	ND	ND
3/15/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
<b>MW-2</b>							
9/2/99	--	--	ND	ND	ND	ND	ND
12/14/99	ND	ND	ND	ND	ND	ND	ND
3/14/00	ND	ND	ND	1300	ND	ND	ND
5/31/00	ND	ND	ND	ND	ND	ND	ND
8/29/00	ND	ND	ND	250	ND	ND	ND
12/1/00	ND	ND	ND	ND	ND	ND	ND
3/17/01	ND	ND	ND	ND	14.8	ND	ND
5/23/01	ND	ND	ND	ND	ND	ND	ND
9/24/01	ND<100	ND<100	ND<100	ND<5000	ND<100	ND<100	ND<5000000
12/10/01	ND<25	ND<25	ND<25	ND<500	ND<25	ND<25	ND<12000000
3/11/02	ND<20	ND<20	ND<20	ND<1000	ND<20	ND<20	ND<5000000
6/7/02	ND<25	ND<25	ND<25	ND<1000	ND<25	ND<25	ND<2000000
9/3/02	ND<20	ND<20	ND<20	ND<1000	ND<20	ND<20	ND<5000000
<b>MW-2a</b>							
12/12/02	2.3	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
3/13/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
6/12/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
9/12/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500
12/31/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500
2/12/04	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500
6/7/04	ND<0.5	ND<0.5	ND<1	ND<12	ND<1	ND<1	ND<800
9/17/04	--	--	ND<0.50	6.7	ND<1.0	ND<0.50	ND<50
12/11/04	--	--	ND<0.50	ND<5.0	ND<1.0	ND<0.50	ND<50

**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	EDC (µg/l)	EDB (µg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8260B (µg/l)
<b>MW-2A</b>	<b>continued</b>						
3/15/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
5/17/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
7/27/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
11/23/05	--	--	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250
<b>MW-3</b>							
9/2/99	--	--	ND	ND	ND	ND	ND
3/11/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
5/17/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
7/27/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
11/23/05	--	--	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250
<b>MW-4</b>							
9/2/99	--	--	ND	ND	ND	ND	ND
12/10/01	ND<14	ND<14	ND<14	ND<290	ND<14	ND<14	ND<7100000
12/12/02	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
9/12/03	--	--	--	--	--	--	ND<500
9/17/04	--	--	ND<0.50	ND<5.0	ND<1.0	ND<0.50	ND<50
12/11/04	--	--	ND<2.5	ND<25	ND<5.0	ND<2.5	ND<250
3/11/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
5/17/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
7/27/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
11/23/05	--	--	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250
<b>MW-5</b>							
9/12/03	--	--	--	--	--	--	ND<500
3/11/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
5/17/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
7/27/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50



**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	EDC (µg/l)	EDB (µg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8260B (µg/l)
<b>MW-5 continued</b>							
11/23/05	--	--	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250
<b>MW-6</b>							
3/17/01	219	ND	ND	ND	ND	ND	ND
9/24/01	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<1000000
12/10/01	ND<25	ND<25	ND<25	ND<500	ND<25	ND<25	ND<12000000
3/11/02	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
12/12/02	ND<200	ND<200	ND<200	ND<10000	ND<200	ND<200	ND<50000000
3/13/03	ND<100	ND<100	ND<100	ND<5000	ND<100	ND<100	ND<25000000
6/12/03	ND<40	ND<40	ND<40	ND<2000	ND<40	ND<40	ND<10000000
9/12/03	--	--	--	--	--	--	ND<2500
2/12/04	ND<40	ND<40	ND<40	ND<2000	ND<40	ND<40	ND<10000
6/7/04	ND<5	ND<5	ND<10	ND<200	ND<10	ND<10	ND<8000
9/17/04	--	--	ND<10	ND<100	ND<20	ND<10	ND<1000
12/11/04	--	--	ND<10	ND<100	ND<20	ND<10	ND<1000
3/11/05	--	--	ND<10	ND<100	ND<10	ND<10	ND<1000
5/17/05	--	--	ND<10	ND<100	ND<10	ND<10	ND<1000
7/27/05	--	--	ND<10	ND<100	ND<10	ND<10	ND<1000
11/23/05	--	--	1.0	ND<10	ND<0.50	ND<0.50	ND<250

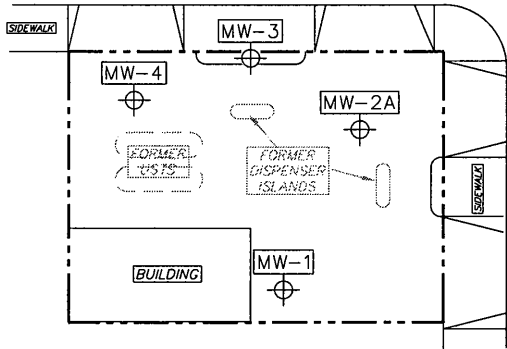


WEBSTER STREET

PACIFIC AVENUE

MW-5

MW-6



NOTES:

Modified from a map provided by  
Gettler-Ryan, Inc., dated 1/03.  
UST = underground storage tank.

LEGEND

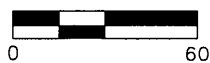
MW-6  Monitoring Well

SITE PLAN

Former 76 Station 0843  
1629 Webster Street  
Alameda, California

FIGURE 2

SCALE (FEET)



**TRC**

PS-1:1 0843-003

**Appendix H**  
**Virgil Chavez Land Surveying Results**

**Virgil Chavez Land Surveying**

721 Tuolumne Street  
Vallejo, California 94590  
(707) 553-2476 • Fax (707) 553-8698

December 1, 2005  
Project No.: 2640-04A

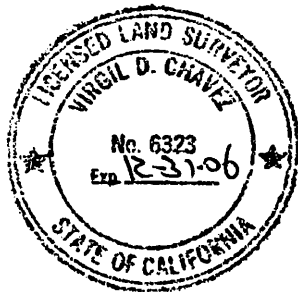
Stewart Dalie  
Cambria Environmental  
5900 Hollis Street, Suite A  
Emeryville, CA 94608

Subject: Monitoring Well Survey  
Shell Service Station  
1601 Webster Street  
Alameda, CA

Dear Stu:

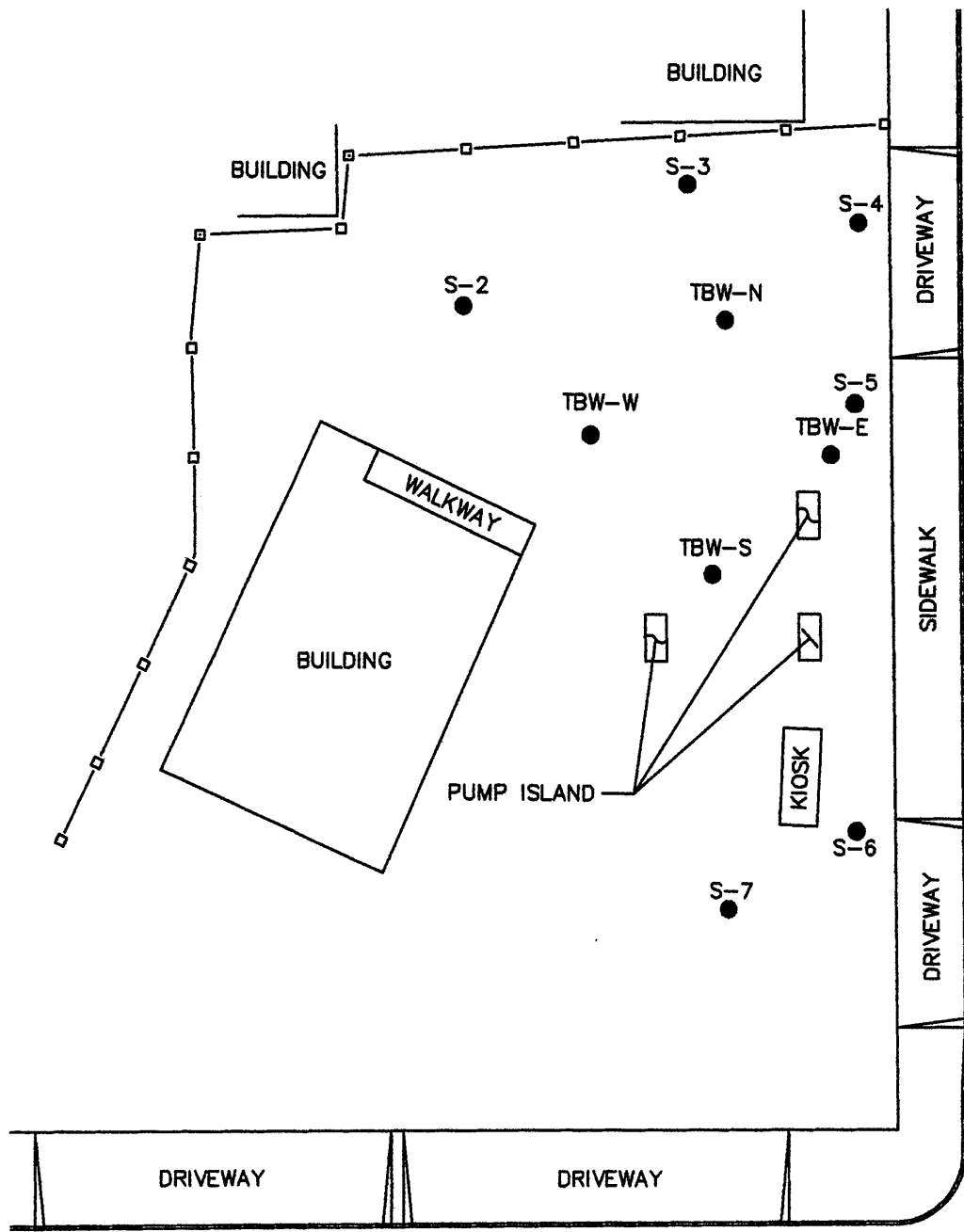
This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was performed on November 30, 2005. The benchmark for this survey was a brass disk marked WEB PAC 1947, in a monument well at the northwest corner of Webster Street and Pacific Avenue. The latitude, longitude and coordinates are for top of casings and are based on the California State Coordinate System, Zone III (NAD83).  
Benchmark Elevation = 16.81 feet (NAVD 88).

<u>Latitude</u>	<u>Longitude</u>	<u>Northing</u>	<u>Easting</u>	<u>Elev.</u>	<u>Desc.</u>
				19.99	RIM S-2
37.7757121	-122.2770855	2109792.56	6048086.67	19.73	TOC S-2
				19.43	RIM S-3
37.7757639	-122.2769527	2109810.70	6048125.41	19.14	TOC S-3
				18.94	RIM S-4
37.7757437	-122.2768529	2109802.79	6048154.12	18.16	TOC S-4
				19.17	RIM S-5
37.7756610	-122.2768603	2109772.70	6048151.41	18.68	TOC S-5
				19.56	RIM S-6
37.7754690	-122.2768684	2109702.86	6048147.74	19.32	TOC S-6
				19.90	RIM S-7
37.7754364	-122.2769447	2109691.41	6048125.45	19.44	TOC S-7

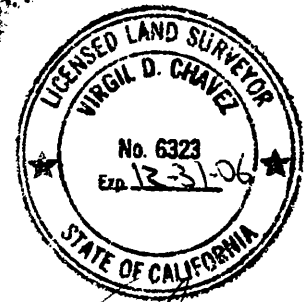


Sincerely,

*Virgil D. Chavez*  
 \_\_\_\_\_  
 Virgil D. Chavez, PLS 6323



WEBSTER STREET



*Virgil D. Chavez*

PLANTER

MONITORING WELL PLAT  
 SHELL SERVICE STATION  
 1601 WEBSTER STREET  
 ALAMEDA, CALIF

VIRGIL CHAVEZ LAND SURVEYING  
 721 TUOLUMNE STREET  
 VALLEJO, CALIFORNIA  
 (707) 553-2476

LINCOLN AVENUE

**Appendix I**  
**Certified Analytical Reports**

**Cambria Environmental Sonoma**

November 29, 2005

270 Perkins Street  
Sonoma, CA 95476

Attn.: Dennis Baertschi

Project#: 247-0467-009

Project: 97564701

Site: 1601 Webster Street, Alameda, CA

Attached is our report for your samples received on 11/07/2005 14:13

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/22/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: [mbrewer@stl-inc.com](mailto:mbrewer@stl-inc.com)

Sincerely,



Melissa Brewer  
Project Manager

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
S-2-5.0	10/31/2005 09:30	Soil	1
SB-10-5.0	10/31/2005 10:20	Soil	2
S-3-5.0	10/31/2005 11:00	Soil	3
SB-9-5.0	10/31/2005 11:55	Soil	4
S-4-5.0	10/31/2005 12:15	Soil	5
SB-11-5.0	10/31/2005 13:15	Soil	6
S-5-5.0	10/31/2005 13:45	Soil	7
S-6-5.0	10/31/2005 15:15	Soil	8
S-7-5.0	10/31/2005 16:00	Soil	9
SB-13-5.0	11/02/2005 09:30	Soil	10
SB-12-5.0	11/02/2005 10:15	Soil	12
SB-14-5.0	11/03/2005 09:15	Soil	24



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>S-2-5.0</b>	Lab ID:	2005-11-0145 - 1
Sampled:	10/31/2005 09:30	Extracted:	11/10/2005 10:58
Matrix:	Soil	QC Batch#:	2005/11/10-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 10:58	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 10:58	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 10:58	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 10:58	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 10:58	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 10:58	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 10:58	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 10:58	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 10:58	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 10:58	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	99.0	76-124	%	1.00	11/10/2005 10:58	
Toluene-d8	95.2	75-116	%	1.00	11/10/2005 10:58	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>SB-10-5.0</b>	Lab ID:	2005-11-0145 - 2
Sampled:	10/31/2005 10:20	Extracted:	11/10/2005 11:19
Matrix:	Soil	QC Batch#:	2005/11/10-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 11:19	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 11:19	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 11:19	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 11:19	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 11:19	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 11:19	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 11:19	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 11:19	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 11:19	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 11:19	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	101.3	76-124	%	1.00	11/10/2005 11:19	
Toluene-d8	93.0	75-116	%	1.00	11/10/2005 11:19	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>S-3-5.0</b>	Lab ID: 2005-11-0145 - 3
Sampled: 10/31/2005 11:00	Extracted: 11/10/2005 12:01
Matrix: Soil	QC Batch#: 2005/11/10-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 12:01	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 12:01	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 12:01	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 12:01	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 12:01	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 12:01	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 12:01	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 12:01	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 12:01	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 12:01	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.3	76-124	%	1.00	11/10/2005 12:01	
Toluene-d8	98.1	75-116	%	1.00	11/10/2005 12:01	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

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Sonoma, CA 95476  
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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-9-5.0</b>	Lab ID: 2005-11-0145 - 4
Sampled: 10/31/2005 11:55	Extracted: 11/10/2005 12:22
Matrix: Soil	QC Batch#: 2005/11/10-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 12:22	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 12:22	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 12:22	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 12:22	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 12:22	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 12:22	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 12:22	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 12:22	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 12:22	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 12:22	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	97.5	76-124	%	1.00	11/10/2005 12:22	
Toluene-d8	95.8	75-116	%	1.00	11/10/2005 12:22	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>S-4-5.0</b>	Lab ID:	2005-11-0145 - 5
Sampled:	10/31/2005 12:15	Extracted:	11/10/2005 12:43
Matrix:	Soil	QC Batch#:	2005/11/10-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 12:43	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 12:43	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 12:43	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 12:43	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 12:43	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 12:43	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 12:43	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 12:43	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 12:43	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 12:43	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	98.7	76-124	%	1.00	11/10/2005 12:43	
Toluene-d8	91.5	75-116	%	1.00	11/10/2005 12:43	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-11-5.0</b>	Lab ID: 2005-11-0145 - 6
Sampled: 10/31/2005 13:15	Extracted: 11/10/2005 21:26
Matrix: Soil	QC Batch#: 2005/11/10-2A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 21:26	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 21:26	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 21:26	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 21:26	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 21:26	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 21:26	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 21:26	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 21:26	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 21:26	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 21:26	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	104.3	76-124	%	1.00	11/10/2005 21:26	
Toluene-d8	91.3	75-116	%	1.00	11/10/2005 21:26	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: S-5-5.0	Lab ID: 2005-11-0145 - 7
Sampled: 10/31/2005 13:45	Extracted: 11/10/2005 13:05
Matrix: Soil	QC Batch#: 2005/11/10-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 13:05	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 13:05	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 13:05	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 13:05	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 13:05	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 13:05	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 13:05	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 13:05	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 13:05	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 13:05	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	97.7	76-124	%	1.00	11/10/2005 13:05	
Toluene-d8	89.4	75-116	%	1.00	11/10/2005 13:05	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>S-6-5.0</b>	Lab ID:	2005-11-0145 - 8
Sampled:	10/31/2005 15:15	Extracted:	11/10/2005 13:27
Matrix:	Soil	QC Batch#:	2005/11/10-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 13:27	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 13:27	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 13:27	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 13:27	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 13:27	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 13:27	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 13:27	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 13:27	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 13:27	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 13:27	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	97.4	76-124	%	1.00	11/10/2005 13:27	
Toluene-d8	96.1	75-116	%	1.00	11/10/2005 13:27	



### Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>S-7-5.0</b>	Lab ID:	2005-11-0145 - 9
Sampled:	10/31/2005 16:00	Extracted:	11/11/2005 22:28
Matrix:	Soil	QC Batch#:	2005/11/11-2A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/11/2005 22:28	
Benzene	ND	0.0050	mg/Kg	1.00	11/11/2005 22:28	
Toluene	ND	0.0050	mg/Kg	1.00	11/11/2005 22:28	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/11/2005 22:28	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/11/2005 22:28	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/11/2005 22:28	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/11/2005 22:28	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/11/2005 22:28	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/11/2005 22:28	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/11/2005 22:28	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	101.0	76-124	%	1.00	11/11/2005 22:28	
Toluene-d8	93.8	75-116	%	1.00	11/11/2005 22:28	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>SB-13-5.0</b>	Lab ID:	2005-11-0145 - 10
Sampled:	11/02/2005 09:30	Extracted:	11/10/2005 15:13
Matrix:	Soil	QC Batch#:	2005/11/10-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 15:13	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 15:13	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 15:13	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 15:13	
Total xylenes	0.0080	0.0050	mg/Kg	1.00	11/10/2005 15:13	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 15:13	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 15:13	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 15:13	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 15:13	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 15:13	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	106.1	76-124	%	1.00	11/10/2005 15:13	
Toluene-d8	91.9	75-116	%	1.00	11/10/2005 15:13	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-12-5.0</b>	Lab ID: 2005-11-0145 - 12
Sampled: 11/02/2005 10:15	Extracted: 11/10/2005 21:47
Matrix: Soil	QC Batch#: 2005/11/10-2A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 21:47	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 21:47	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 21:47	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 21:47	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 21:47	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 21:47	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 21:47	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 21:47	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 21:47	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 21:47	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	113.2	76-124	%	1.00	11/10/2005 21:47	
Toluene-d8	93.7	75-116	%	1.00	11/10/2005 21:47	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-14-5.0</b>	Lab ID: 2005-11-0145 - 24
Sampled: 11/03/2005 09:15	Extracted: 11/10/2005 14:52
Matrix: Soil	QC Batch#: 2005/11/10-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/10/2005 14:52	
Benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 14:52	
Toluene	ND	0.0050	mg/Kg	1.00	11/10/2005 14:52	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/10/2005 14:52	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/10/2005 14:52	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/10/2005 14:52	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 14:52	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/10/2005 14:52	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/10/2005 14:52	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/10/2005 14:52	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	103.0	76-124	%	1.00	11/10/2005 14:52	
Toluene-d8	95.9	75-116	%	1.00	11/10/2005 14:52	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Soil**

**QC Batch # 2005/11/10-1A.69**

MB: 2005/11/10-1A.69-034

Date Extracted: 11/10/2005 07:34

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/10/2005 07:34	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	11/10/2005 07:34	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	11/10/2005 07:34	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	11/10/2005 07:34	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	11/10/2005 07:34	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	11/10/2005 07:34	
Benzene	ND	0.0050	mg/Kg	11/10/2005 07:34	
Toluene	ND	0.0050	mg/Kg	11/10/2005 07:34	
Ethyl benzene	ND	0.0050	mg/Kg	11/10/2005 07:34	
Total xylenes	ND	0.0050	mg/Kg	11/10/2005 07:34	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	105.4	76-124	%	11/10/2005 07:34	
Toluene-d8	95.6	75-116	%	11/10/2005 07:34	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Soil**

**QC Batch # 2005/11/10-2A.69**

MB: 2005/11/10-2A.69-036

Date Extracted: 11/10/2005 18:36

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/10/2005 18:36	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	11/10/2005 18:36	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	11/10/2005 18:36	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	11/10/2005 18:36	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	11/10/2005 18:36	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	11/10/2005 18:36	
Benzene	ND	0.0050	mg/Kg	11/10/2005 18:36	
Toluene	ND	0.0050	mg/Kg	11/10/2005 18:36	
Ethyl benzene	ND	0.0050	mg/Kg	11/10/2005 18:36	
Total xylenes	ND	0.0050	mg/Kg	11/10/2005 18:36	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	104.2	76-124	%	11/10/2005 18:36	
Toluene-d8	93.4	75-116	%	11/10/2005 18:36	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Soil**

**QC Batch # 2005/11/11-2A.69**

MB: 2005/11/11-2A.69-016

Date Extracted: 11/11/2005 19:16

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/11/2005 19:16	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	11/11/2005 19:16	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	11/11/2005 19:16	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	11/11/2005 19:16	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	11/11/2005 19:16	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	11/11/2005 19:16	
Benzene	ND	0.0050	mg/Kg	11/11/2005 19:16	
Toluene	ND	0.0050	mg/Kg	11/11/2005 19:16	
Ethyl benzene	ND	0.0050	mg/Kg	11/11/2005 19:16	
Total xylenes	ND	0.0050	mg/Kg	11/11/2005 19:16	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	100.0	76-124	%	11/11/2005 19:16	
Toluene-d8	94.8	75-116	%	11/11/2005 19:16	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report										
Prep(s): 5030B						Test(s): 8260B				
<b>Laboratory Control Spike</b>			<b>Soil</b>			<b>QC Batch # 2005/11/10-1A.69</b>				
LCS	2005/11/10-1A.69-051		Extracted: 11/10/2005			Analyzed: 11/10/2005 06:51				
LCSD	2005/11/10-1A.69-052		Extracted: 11/10/2005			Analyzed: 11/10/2005 07:12				
Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	0.0573	0.0567	0.05	114.6	113.4	1.1	65-165	20		
Benzene	0.0494	0.0490	0.05	98.8	98.0	0.8	69-129	20		
Toluene	0.0519	0.0505	0.05	103.8	101.0	2.7	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	478	476	500	95.6	95.2		76-124			
Toluene-d8	488	482	500	97.6	96.4		75-116			



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report									
Prep(s): 5030B						Test(s): 8260B			
<b>Laboratory Control Spike</b>			<b>Soil</b>			<b>QC Batch # 2005/11/10-2A.69</b>			
LCS	2005/11/10-2A.69-015		Extracted: 11/10/2005			Analyzed: 11/10/2005 18:15			
LCSD	2005/11/10-2A.69-018		Extracted: 11/10/2005			Analyzed: 11/10/2005 19:18			

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	0.0569	0.0595	0.05	113.8	119.0	4.5	65-165	20		
Benzene	0.0458	0.0483	0.05	91.6	96.6	5.3	69-129	20		
Toluene	0.0472	0.0489	0.05	94.4	97.8	3.5	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	485	478	500	97.0	95.6		76-124			
Toluene-d8	478	478	500	95.6	95.6		75-116			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report									
Prep(s): 5030B						Test(s): 8260B			
<b>Laboratory Control Spike</b>			<b>Soil</b>			<b>QC Batch # 2005/11/11-2A.69</b>			
LCS	2005/11/11-2A.69-033		Extracted: 11/11/2005			Analyzed: 11/11/2005 18:33			
LCSD	2005/11/11-2A.69-055		Extracted: 11/11/2005			Analyzed: 11/11/2005 18:55			

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	0.0645	0.0635	0.05	129.0	127.0	1.6	65-165	20		
Benzene	0.0513	0.0510	0.05	102.6	102.0	0.6	69-129	20		
Toluene	0.0523	0.0523	0.05	104.6	104.6	0.0	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	470	478	500	94.0	95.6		76-124			
Toluene-d8	490	475	500	98.0	95.0		75-116			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B	Test(s): 8260B	
<b>Matrix Spike ( MS / MSD )</b>	<b>Soil</b>	<b>QC Batch # 2005/11/10-1A.69</b>
MS/MSD		Lab ID: 2005-11-0046 - 001
MS: 2005/11/10-1A.69-012	Extracted: 11/10/2005	Analyzed: 11/10/2005 09:12
		Dilution: 1.00
MSD: 2005/11/10-1A.69-033	Extracted: 11/10/2005	Analyzed: 11/10/2005 09:33
		Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level mg/Kg	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.0592	0.0564	ND	0.048543	122.0	114.2	6.6	65-165	20		
Benzene	0.0476	0.0481	ND	0.048543	98.1	97.4	0.7	69-129	20		
Toluene	0.0492	0.0500	ND	0.048543	101.4	101.2	0.2	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	486	459		500	97.2	91.8		76-124			
Toluene-d8	472	472		500	94.4	94.4		75-116			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report			
Prep(s): 5030B	Test(s): 8260B		
<b>Matrix Spike ( MS / MSD )</b>	<b>Soil</b>	<b>QC Batch # 2005/11/11-2A.69</b>	
S-7-5.0 >> MS		Lab ID:	2005-11-0145 - 009
MS: 2005/11/11-2A.69-045	Extracted: 11/11/2005	Analyzed:	11/11/2005 21:45
		Dilution:	1.00
MSD: 2005/11/11-2A.69-006	Extracted: 11/11/2005	Analyzed:	11/11/2005 22:06
		Dilution:	1.00

Compound	Conc. mg/Kg			Spk.Level mg/Kg	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.0531	0.0463	ND	0.046641	113.8	94.6	18.5	65-165	20		
Benzene	0.0436	0.0401	ND	0.046641	93.5	82.0	13.2	69-129	20		
Toluene	0.0459	0.0410	ND	0.046641	98.4	83.8	16.1	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	469	463		500	93.8	92.6		76-124			
Toluene-d8	477	483		500	95.4	96.6		75-116			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009

97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-14-27W	11/03/2005 10:30	Water	27

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-14-27W</b>	Lab ID: 2005-11-0145 - 27
Sampled: 11/03/2005 10:30	Extracted: 11/11/2005 15:23
Matrix: Water	QC Batch#: 2005/11/11-1B.64
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/11/2005 15:23	
Benzene	ND	0.50	ug/L	1.00	11/11/2005 15:23	
Toluene	ND	0.50	ug/L	1.00	11/11/2005 15:23	
Ethylbenzene	ND	0.50	ug/L	1.00	11/11/2005 15:23	
Total xylenes	ND	1.0	ug/L	1.00	11/11/2005 15:23	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/11/2005 15:23	
Methyl tert-butyl ether (MTBE)	2.5	0.50	ug/L	1.00	11/11/2005 15:23	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 15:23	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/11/2005 15:23	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/11/2005 15:23	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	110.4	73-130	%	1.00	11/11/2005 15:23	
Toluene-d8	106.8	81-114	%	1.00	11/11/2005 15:23	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Water**

**QC Batch # 2005/11/11-1B.64**

MB: 2005/11/11-1B.64-007

Date Extracted: 11/11/2005 08:07

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/11/2005 08:07	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/11/2005 08:07	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/11/2005 08:07	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/11/2005 08:07	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/11/2005 08:07	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/11/2005 08:07	
Benzene	ND	0.5	ug/L	11/11/2005 08:07	
Toluene	ND	0.5	ug/L	11/11/2005 08:07	
Ethylbenzene	ND	0.5	ug/L	11/11/2005 08:07	
Total xylenes	ND	1.0	ug/L	11/11/2005 08:07	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	103.4	73-130	%	11/11/2005 08:07	
Toluene-d8	108.6	81-114	%	11/11/2005 08:07	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report										
Prep(s): 5030B						Test(s): 8260B				
<b>Laboratory Control Spike</b>			<b>Water</b>			<b>QC Batch # 2005/11/11-1B.64</b>				
LCS	2005/11/11-1B.64-025		Extracted: 11/11/2005			Analyzed: 11/11/2005 07:25				
LCSD	2005/11/11-1B.64-046		Extracted: 11/11/2005			Analyzed: 11/11/2005 07:46				
Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	22.0	21.4	25	88.0	85.6	2.8	65-165	20		
Benzene	22.5	22.4	25	90.0	89.6	0.4	69-129	20		
Toluene	23.7	23.8	25	94.8	95.2	0.4	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	496	491	500	99.2	98.2		73-130			
Toluene-d8	557	545	500	111.4	109.0		81-114			



### Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Project: 247-0467-009  
 97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

#### Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-13-6.25W	11/02/2005 09:30	Water	11
SB-12-6.5W	11/02/2005 10:30	Water	13
SB-13-15W	11/02/2005 11:10	Water	14
SB-13-25W	11/02/2005 11:20	Water	15
SB-13-36W	11/02/2005 11:30	Water	16
SB-12-15W	11/02/2005 14:00	Water	17
SB-12-25W	11/02/2005 14:20	Water	18
SB-12-36W	11/02/2005 14:40	Water	19
SB-10-7W	11/02/2005 15:45	Water	20
SB-10-15W	11/02/2005 16:20	Water	21
SB-10-25W	11/02/2005 16:40	Water	22
SB-10-36W	11/02/2005 17:00	Water	23
SB-14-5.75W	11/03/2005 09:45	Water	25
SB-14-15W	11/03/2005 10:15	Water	26
SB-14-27W	11/03/2005 10:30	Water	27
SB-14-36W	11/03/2005 11:00	Water	28
SB-9-6.5W	11/03/2005 11:30	Water	29
SB-9-15W	11/03/2005 11:50	Water	30
SB-9-27W	11/03/2005 12:10	Water	31
SB-9-36W	11/03/2005 12:30	Water	32
SB-11-7W	11/03/2005 13:45	Water	33
SB-11-15W	11/03/2005 14:20	Water	34
SB-11-27W	11/03/2005 15:00	Water	35
SB-11-36W	11/03/2005 15:15	Water	36

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-13-6.25W</b>	Lab ID: 2005-11-0145 - 11
Sampled: 11/02/2005 09:30	Extracted: 11/12/2005 10:55
Matrix: Water	QC Batch#: 2005/11/12-1A.71
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	2500	ug/L	50.00	11/12/2005 10:55	
Benzene	ND	25	ug/L	50.00	11/12/2005 10:55	
Toluene	ND	25	ug/L	50.00	11/12/2005 10:55	
Ethylbenzene	ND	25	ug/L	50.00	11/12/2005 10:55	
Total xylenes	ND	50	ug/L	50.00	11/12/2005 10:55	
tert-Butyl alcohol (TBA)	ND	250	ug/L	50.00	11/12/2005 10:55	
Methyl tert-butyl ether (MTBE)	4100	25	ug/L	50.00	11/12/2005 10:55	
Di-isopropyl Ether (DIPE)	ND	100	ug/L	50.00	11/12/2005 10:55	
Ethyl tert-butyl ether (ETBE)	ND	100	ug/L	50.00	11/12/2005 10:55	
tert-Amyl methyl ether (TAME)	ND	100	ug/L	50.00	11/12/2005 10:55	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.7	73-130	%	50.00	11/12/2005 10:55	
Toluene-d8	102.4	81-114	%	50.00	11/12/2005 10:55	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-12-6.5W</b>	Lab ID: 2005-11-0145 - 13
Sampled: 11/02/2005 10:30	Extracted: 11/11/2005 09:48 11/12/2005 02:11
Matrix: Water	QC Batch#: 2005/11/11-1A.64 2005/11/11-2C.65
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 02:11	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 02:11	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 02:11	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 02:11	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 02:11	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 02:11	
Methyl tert-butyl ether (MTBE)	0.55	0.50	ug/L	1.00	11/12/2005 02:11	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 09:48	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/12/2005 02:11	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/12/2005 02:11	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	92.5	73-130	%	1.00	11/12/2005 02:11	
1,2-Dichloroethane-d4	106.1	73-130	%	1.00	11/11/2005 09:48	
Toluene-d8	93.7	81-114	%	1.00	11/12/2005 02:11	
Toluene-d8	104.7	81-114	%	1.00	11/11/2005 09:48	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>SB-13-15W</b>	Lab ID:	2005-11-0145 - 14
Sampled:	11/02/2005 11:10	Extracted:	11/11/2005 10:09 11/12/2005 02:37
Matrix:	Water	QC Batch#:	2005/11/11-1A.64 2005/11/11-2C.65
pH:	<2		

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 02:37	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 02:37	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 02:37	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 02:37	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 02:37	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 02:37	
Methyl tert-butyl ether (MTBE)	4.6	0.50	ug/L	1.00	11/12/2005 02:37	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 10:09	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/12/2005 02:37	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/12/2005 02:37	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	95.8	73-130	%	1.00	11/12/2005 02:37	
1,2-Dichloroethane-d4	105.1	73-130	%	1.00	11/11/2005 10:09	
Toluene-d8	91.2	81-114	%	1.00	11/12/2005 02:37	
Toluene-d8	106.3	81-114	%	1.00	11/11/2005 10:09	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-13-25W</b>	Lab ID: 2005-11-0145 - 15
Sampled: 11/02/2005 11:20	Extracted: 11/11/2005 10:30 11/12/2005 03:03
Matrix: Water	QC Batch#: 2005/11/11-1A.64 2005/11/11-2C.65
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 03:03	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 03:03	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 03:03	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 03:03	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 03:03	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 03:03	
Methyl tert-butyl ether (MTBE)	1.1	0.50	ug/L	1.00	11/12/2005 03:03	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 10:30	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/12/2005 03:03	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/12/2005 03:03	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	93.7	73-130	%	1.00	11/12/2005 03:03	
1,2-Dichloroethane-d4	105.6	73-130	%	1.00	11/11/2005 10:30	
Toluene-d8	93.4	81-114	%	1.00	11/12/2005 03:03	
Toluene-d8	108.7	81-114	%	1.00	11/11/2005 10:30	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

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Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-13-36W</b>	Lab ID: 2005-11-0145 - 16
Sampled: 11/02/2005 11:30	Extracted: 11/11/2005 10:51 11/12/2005 03:29
Matrix: Water	QC Batch#: 2005/11/11-1A.64 2005/11/11-2C.65
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	64	50	ug/L	1.00	11/12/2005 03:29	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 03:29	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 03:29	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 03:29	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 03:29	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 03:29	
Methyl tert-butyl ether (MTBE)	1.0	0.50	ug/L	1.00	11/12/2005 03:29	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 10:51	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/12/2005 03:29	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/12/2005 03:29	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.1	73-130	%	1.00	11/12/2005 03:29	
1,2-Dichloroethane-d4	105.1	73-130	%	1.00	11/11/2005 10:51	
Toluene-d8	91.6	81-114	%	1.00	11/12/2005 03:29	
Toluene-d8	108.8	81-114	%	1.00	11/11/2005 10:51	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-12-15W</b>	Lab ID: 2005-11-0145 - 17
Sampled: 11/02/2005 14:00	Extracted: 11/11/2005 11:12
Matrix: Water	QC Batch#: 2005/11/11-1B.64
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/11/2005 11:12	
Benzene	ND	0.50	ug/L	1.00	11/11/2005 11:12	
Toluene	ND	0.50	ug/L	1.00	11/11/2005 11:12	
Ethylbenzene	ND	0.50	ug/L	1.00	11/11/2005 11:12	
Total xylenes	ND	1.0	ug/L	1.00	11/11/2005 11:12	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/11/2005 11:12	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	11/11/2005 11:12	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 11:12	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/11/2005 11:12	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/11/2005 11:12	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	105.6	73-130	%	1.00	11/11/2005 11:12	
Toluene-d8	109.5	81-114	%	1.00	11/11/2005 11:12	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-12-25W</b>	Lab ID: 2005-11-0145 - 18
Sampled: 11/02/2005 14:20	Extracted: 11/11/2005 11:33
Matrix: Water	QC Batch#: 2005/11/11-1B.64
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/11/2005 11:33	
Benzene	ND	0.50	ug/L	1.00	11/11/2005 11:33	
Toluene	ND	0.50	ug/L	1.00	11/11/2005 11:33	
Ethylbenzene	ND	0.50	ug/L	1.00	11/11/2005 11:33	
Total xylenes	ND	1.0	ug/L	1.00	11/11/2005 11:33	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/11/2005 11:33	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	11/11/2005 11:33	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 11:33	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/11/2005 11:33	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/11/2005 11:33	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	104.0	73-130	%	1.00	11/11/2005 11:33	
Toluene-d8	110.2	81-114	%	1.00	11/11/2005 11:33	



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-12-36W</b>	Lab ID: 2005-11-0145 - 19
Sampled: 11/02/2005 14:40	Extracted: 11/11/2005 11:53
Matrix: Water	QC Batch#: 2005/11/11-1B.64
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/11/2005 11:53	
Benzene	ND	0.50	ug/L	1.00	11/11/2005 11:53	
Toluene	ND	0.50	ug/L	1.00	11/11/2005 11:53	
Ethylbenzene	ND	0.50	ug/L	1.00	11/11/2005 11:53	
Total xylenes	ND	1.0	ug/L	1.00	11/11/2005 11:53	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/11/2005 11:53	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	11/11/2005 11:53	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 11:53	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/11/2005 11:53	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/11/2005 11:53	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	105.4	73-130	%	1.00	11/11/2005 11:53	
Toluene-d8	109.5	81-114	%	1.00	11/11/2005 11:53	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>SB-10-7W</b>	Lab ID:	2005-11-0145 - 20
Sampled:	11/02/2005 15:45	Extracted:	11/11/2005 08:45 11/12/2005 03:54
Matrix:	Water	QC Batch#:	2005/11/11-1A.64 2005/11/11-2C.65
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	53	50	ug/L	1.00	11/11/2005 08:45	
Benzene	ND	0.50	ug/L	1.00	11/11/2005 08:45	
Toluene	ND	0.50	ug/L	1.00	11/11/2005 08:45	
Ethylbenzene	ND	0.50	ug/L	1.00	11/11/2005 08:45	
Total xylenes	ND	1.0	ug/L	1.00	11/11/2005 08:45	
tert-Butyl alcohol (TBA)	1300	250	ug/L	50.00	11/12/2005 03:54	
Methyl tert-butyl ether (MTBE)	3000	25	ug/L	50.00	11/12/2005 03:54	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 08:45	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/11/2005 08:45	
tert-Amyl methyl ether (TAME)	3.7	2.0	ug/L	1.00	11/11/2005 08:45	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	95.1	73-130	%	50.00	11/12/2005 03:54	
1,2-Dichloroethane-d4	100.4	73-130	%	1.00	11/11/2005 08:45	
Toluene-d8	93.2	81-114	%	50.00	11/12/2005 03:54	
Toluene-d8	111.2	81-114	%	1.00	11/11/2005 08:45	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-10-15W</b>	Lab ID: 2005-11-0145 - 21
Sampled: 11/02/2005 16:20	Extracted: 11/12/2005 11:22
Matrix: Water	QC Batch#: 2005/11/12-1A.71
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	500	500	ug/L	10.00	11/12/2005 11:22	
Benzene	ND	5.0	ug/L	10.00	11/12/2005 11:22	
Toluene	ND	5.0	ug/L	10.00	11/12/2005 11:22	
Ethylbenzene	ND	5.0	ug/L	10.00	11/12/2005 11:22	
Total xylenes	ND	10	ug/L	10.00	11/12/2005 11:22	
tert-Butyl alcohol (TBA)	2200	50	ug/L	10.00	11/12/2005 11:22	
Methyl tert-butyl ether (MTBE)	690	5.0	ug/L	10.00	11/12/2005 11:22	
Di-isopropyl Ether (DIPE)	ND	20	ug/L	10.00	11/12/2005 11:22	
Ethyl tert-butyl ether (ETBE)	ND	20	ug/L	10.00	11/12/2005 11:22	
tert-Amyl methyl ether (TAME)	ND	20	ug/L	10.00	11/12/2005 11:22	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.4	73-130	%	10.00	11/12/2005 11:22	
Toluene-d8	103.1	81-114	%	10.00	11/12/2005 11:22	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-10-25W</b>	Lab ID: 2005-11-0145 - 22
Sampled: 11/02/2005 16:40	Extracted: 11/12/2005 11:49
Matrix: Water	QC Batch#: 2005/11/12-1A.71
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1300	ug/L	25.00	11/12/2005 11:49	
Benzene	ND	13	ug/L	25.00	11/12/2005 11:49	
Toluene	ND	13	ug/L	25.00	11/12/2005 11:49	
Ethylbenzene	ND	13	ug/L	25.00	11/12/2005 11:49	
Total xylenes	ND	25	ug/L	25.00	11/12/2005 11:49	
tert-Butyl alcohol (TBA)	ND	130	ug/L	25.00	11/12/2005 11:49	
Methyl tert-butyl ether (MTBE)	2700	13	ug/L	25.00	11/12/2005 11:49	
Di-isopropyl Ether (DIPE)	ND	50	ug/L	25.00	11/12/2005 11:49	
Ethyl tert-butyl ether (ETBE)	ND	50	ug/L	25.00	11/12/2005 11:49	
tert-Amyl methyl ether (TAME)	ND	50	ug/L	25.00	11/12/2005 11:49	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.4	73-130	%	25.00	11/12/2005 11:49	
Toluene-d8	98.3	81-114	%	25.00	11/12/2005 11:49	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-10-36W</b>	Lab ID: 2005-11-0145 - 23
Sampled: 11/02/2005 17:00	Extracted: 11/12/2005 12:16
Matrix: Water	QC Batch#: 2005/11/12-1A.71
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	70	50	ug/L	1.00	11/12/2005 12:16	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 12:16	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 12:16	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 12:16	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 12:16	
tert-Butyl alcohol (TBA)	68	5.0	ug/L	1.00	11/12/2005 12:16	
Methyl tert-butyl ether (MTBE)	76	0.50	ug/L	1.00	11/12/2005 12:16	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/12/2005 12:16	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/12/2005 12:16	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/12/2005 12:16	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	101.8	73-130	%	1.00	11/12/2005 12:16	
Toluene-d8	93.9	81-114	%	1.00	11/12/2005 12:16	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-14-5.75W</b>	Lab ID: 2005-11-0145 - 25
Sampled: 11/03/2005 09:45	Extracted: 11/12/2005 12:43
Matrix: Water	QC Batch#: 2005/11/12-1A.71
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1300	ug/L	25.00	11/12/2005 12:43	
Benzene	ND	13	ug/L	25.00	11/12/2005 12:43	
Toluene	ND	13	ug/L	25.00	11/12/2005 12:43	
Ethylbenzene	ND	13	ug/L	25.00	11/12/2005 12:43	
Total xylenes	ND	25	ug/L	25.00	11/12/2005 12:43	
tert-Butyl alcohol (TBA)	ND	130	ug/L	25.00	11/12/2005 12:43	
Methyl tert-butyl ether (MTBE)	2700	13	ug/L	25.00	11/12/2005 12:43	
Di-isopropyl Ether (DIPE)	ND	50	ug/L	25.00	11/12/2005 12:43	
Ethyl tert-butyl ether (ETBE)	ND	50	ug/L	25.00	11/12/2005 12:43	
tert-Amyl methyl ether (TAME)	ND	50	ug/L	25.00	11/12/2005 12:43	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	103.1	73-130	%	25.00	11/12/2005 12:43	
Toluene-d8	108.2	81-114	%	25.00	11/12/2005 12:43	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-14-15W</b>	Lab ID: 2005-11-0145 - 26
Sampled: 11/03/2005 10:15	Extracted: 11/12/2005 13:09
Matrix: Water	QC Batch#: 2005/11/12-1A.71
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	2500	ug/L	50.00	11/12/2005 13:09	
Benzene	ND	25	ug/L	50.00	11/12/2005 13:09	
Toluene	ND	25	ug/L	50.00	11/12/2005 13:09	
Ethylbenzene	ND	25	ug/L	50.00	11/12/2005 13:09	
Total xylenes	ND	50	ug/L	50.00	11/12/2005 13:09	
tert-Butyl alcohol (TBA)	ND	250	ug/L	50.00	11/12/2005 13:09	
Methyl tert-butyl ether (MTBE)	5900	25	ug/L	50.00	11/12/2005 13:09	
Di-isopropyl Ether (DIPE)	ND	100	ug/L	50.00	11/12/2005 13:09	
Ethyl tert-butyl ether (ETBE)	ND	100	ug/L	50.00	11/12/2005 13:09	
tert-Amyl methyl ether (TAME)	ND	100	ug/L	50.00	11/12/2005 13:09	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.5	73-130	%	50.00	11/12/2005 13:09	
Toluene-d8	104.2	81-114	%	50.00	11/12/2005 13:09	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-14-27W</b>	Lab ID: 2005-11-0145 - 27
Sampled: 11/03/2005 10:30	Extracted: 11/11/2005 15:23
Matrix: Water	QC Batch#: 2005/11/11-1B.64
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/11/2005 15:23	
Benzene	ND	0.50	ug/L	1.00	11/11/2005 15:23	
Toluene	ND	0.50	ug/L	1.00	11/11/2005 15:23	
Ethylbenzene	ND	0.50	ug/L	1.00	11/11/2005 15:23	
Total xylenes	ND	1.0	ug/L	1.00	11/11/2005 15:23	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/11/2005 15:23	
Methyl tert-butyl ether (MTBE)	2.5	0.50	ug/L	1.00	11/11/2005 15:23	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 15:23	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/11/2005 15:23	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/11/2005 15:23	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	110.4	73-130	%	1.00	11/11/2005 15:23	
Toluene-d8	106.8	81-114	%	1.00	11/11/2005 15:23	



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-14-36W</b>	Lab ID: 2005-11-0145 - 28
Sampled: 11/03/2005 11:00	Extracted: 11/11/2005 15:44
Matrix: Water	QC Batch#: 2005/11/11-1B.64
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/11/2005 15:44	
Benzene	ND	0.50	ug/L	1.00	11/11/2005 15:44	
Toluene	ND	0.50	ug/L	1.00	11/11/2005 15:44	
Ethylbenzene	ND	0.50	ug/L	1.00	11/11/2005 15:44	
Total xylenes	ND	1.0	ug/L	1.00	11/11/2005 15:44	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/11/2005 15:44	
Methyl tert-butyl ether (MTBE)	3.7	0.50	ug/L	1.00	11/11/2005 15:44	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/11/2005 15:44	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/11/2005 15:44	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/11/2005 15:44	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	109.0	73-130	%	1.00	11/11/2005 15:44	
Toluene-d8	110.9	81-114	%	1.00	11/11/2005 15:44	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-9-6.5W</b>	Lab ID: 2005-11-0145 - 29
Sampled: 11/03/2005 11:30	Extracted: 11/12/2005 13:36
Matrix: Water	QC Batch#: 2005/11/12-1A.71
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1300	ug/L	25.00	11/12/2005 13:36	
Benzene	ND	13	ug/L	25.00	11/12/2005 13:36	
Toluene	ND	13	ug/L	25.00	11/12/2005 13:36	
Ethylbenzene	ND	13	ug/L	25.00	11/12/2005 13:36	
Total xylenes	ND	25	ug/L	25.00	11/12/2005 13:36	
tert-Butyl alcohol (TBA)	ND	130	ug/L	25.00	11/12/2005 13:36	
Methyl tert-butyl ether (MTBE)	3500	13	ug/L	25.00	11/12/2005 13:36	
Di-isopropyl Ether (DIPE)	ND	50	ug/L	25.00	11/12/2005 13:36	
Ethyl tert-butyl ether (ETBE)	ND	50	ug/L	25.00	11/12/2005 13:36	
tert-Amyl methyl ether (TAME)	ND	50	ug/L	25.00	11/12/2005 13:36	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.3	73-130	%	25.00	11/12/2005 13:36	
Toluene-d8	107.8	81-114	%	25.00	11/12/2005 13:36	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-9-15W</b>	Lab ID: 2005-11-0145 - 30
Sampled: 11/03/2005 11:50	Extracted: 11/14/2005 15:32
Matrix: Water	QC Batch#: 2005/11/14-1B.69
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	2500	ug/L	50.00	11/14/2005 15:32	
Benzene	ND	25	ug/L	50.00	11/14/2005 15:32	
Toluene	ND	25	ug/L	50.00	11/14/2005 15:32	
Ethylbenzene	ND	25	ug/L	50.00	11/14/2005 15:32	
Total xylenes	ND	50	ug/L	50.00	11/14/2005 15:32	
tert-Butyl alcohol (TBA)	ND	250	ug/L	50.00	11/14/2005 15:32	
Methyl tert-butyl ether (MTBE)	9200	25	ug/L	50.00	11/14/2005 15:32	
Di-isopropyl Ether (DIPE)	ND	100	ug/L	50.00	11/14/2005 15:32	
Ethyl tert-butyl ether (ETBE)	ND	100	ug/L	50.00	11/14/2005 15:32	
tert-Amyl methyl ether (TAME)	ND	100	ug/L	50.00	11/14/2005 15:32	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	101.1	73-130	%	50.00	11/14/2005 15:32	
Toluene-d8	92.3	81-114	%	50.00	11/14/2005 15:32	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
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Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-9-27W</b>	Lab ID: 2005-11-0145 - 31
Sampled: 11/03/2005 12:10	Extracted: 11/14/2005 22:35
Matrix: Water	QC Batch#: 2005/11/14-2A.62
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	2500	ug/L	50.00	11/14/2005 22:35	
Benzene	ND	25	ug/L	50.00	11/14/2005 22:35	
Toluene	ND	25	ug/L	50.00	11/14/2005 22:35	
Ethylbenzene	ND	25	ug/L	50.00	11/14/2005 22:35	
Total xylenes	ND	50	ug/L	50.00	11/14/2005 22:35	
tert-Butyl alcohol (TBA)	ND	250	ug/L	50.00	11/14/2005 22:35	
Methyl tert-butyl ether (MTBE)	7800	25	ug/L	50.00	11/14/2005 22:35	
Di-isopropyl Ether (DIPE)	ND	100	ug/L	50.00	11/14/2005 22:35	
Ethyl tert-butyl ether (ETBE)	ND	100	ug/L	50.00	11/14/2005 22:35	
tert-Amyl methyl ether (TAME)	ND	100	ug/L	50.00	11/14/2005 22:35	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.8	73-130	%	50.00	11/14/2005 22:35	
Toluene-d8	100.3	81-114	%	50.00	11/14/2005 22:35	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-9-36W</b>	Lab ID: 2005-11-0145 - 32
Sampled: 11/03/2005 12:30	Extracted: 11/12/2005 08:22
Matrix: Water	QC Batch#: 2005/11/12-1A.64
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 08:22	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 08:22	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 08:22	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 08:22	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 08:22	
tert-Butyl alcohol (TBA)	21	5.0	ug/L	1.00	11/12/2005 08:22	
Methyl tert-butyl ether (MTBE)	87	0.50	ug/L	1.00	11/12/2005 08:22	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/12/2005 08:22	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/12/2005 08:22	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/12/2005 08:22	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	117.9	73-130	%	1.00	11/12/2005 08:22	
Toluene-d8	110.3	81-114	%	1.00	11/12/2005 08:22	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-11-7W</b>	Lab ID: 2005-11-0145 - 33
Sampled: 11/03/2005 13:45	Extracted: 11/14/2005 23:01
Matrix: Water	QC Batch#: 2005/11/14-2A.62
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1300	ug/L	25.00	11/14/2005 23:01	
Benzene	ND	13	ug/L	25.00	11/14/2005 23:01	
Toluene	ND	13	ug/L	25.00	11/14/2005 23:01	
Ethylbenzene	ND	13	ug/L	25.00	11/14/2005 23:01	
Total xylenes	ND	25	ug/L	25.00	11/14/2005 23:01	
tert-Butyl alcohol (TBA)	290	130	ug/L	25.00	11/14/2005 23:01	
Methyl tert-butyl ether (MTBE)	4800	13	ug/L	25.00	11/14/2005 23:01	
Di-isopropyl Ether (DIPE)	ND	50	ug/L	25.00	11/14/2005 23:01	
Ethyl tert-butyl ether (ETBE)	ND	50	ug/L	25.00	11/14/2005 23:01	
tert-Amyl methyl ether (TAME)	ND	50	ug/L	25.00	11/14/2005 23:01	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	93.3	73-130	%	25.00	11/14/2005 23:01	
Toluene-d8	99.3	81-114	%	25.00	11/14/2005 23:01	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-11-15W</b>	Lab ID: 2005-11-0145 - 34
Sampled: 11/03/2005 14:20	Extracted: 11/14/2005 23:27
Matrix: Water	QC Batch#: 2005/11/14-2A.62
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	2000	ug/L	40.00	11/14/2005 23:27	
Benzene	ND	20	ug/L	40.00	11/14/2005 23:27	
Toluene	ND	20	ug/L	40.00	11/14/2005 23:27	
Ethylbenzene	ND	20	ug/L	40.00	11/14/2005 23:27	
Total xylenes	ND	40	ug/L	40.00	11/14/2005 23:27	
tert-Butyl alcohol (TBA)	740	200	ug/L	40.00	11/14/2005 23:27	
Methyl tert-butyl ether (MTBE)	2200	20	ug/L	40.00	11/14/2005 23:27	
Di-isopropyl Ether (DIPE)	ND	80	ug/L	40.00	11/14/2005 23:27	
Ethyl tert-butyl ether (ETBE)	ND	80	ug/L	40.00	11/14/2005 23:27	
tert-Amyl methyl ether (TAME)	ND	80	ug/L	40.00	11/14/2005 23:27	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	93.9	73-130	%	40.00	11/14/2005 23:27	
Toluene-d8	106.6	81-114	%	40.00	11/14/2005 23:27	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-11-27W</b>	Lab ID: 2005-11-0145 - 35
Sampled: 11/03/2005 15:00	Extracted: 11/14/2005 23:53
Matrix: Water	QC Batch#: 2005/11/14-2A.62
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1000	ug/L	20.00	11/14/2005 23:53	
Benzene	ND	10	ug/L	20.00	11/14/2005 23:53	
Toluene	ND	10	ug/L	20.00	11/14/2005 23:53	
Ethylbenzene	ND	10	ug/L	20.00	11/14/2005 23:53	
Total xylenes	ND	20	ug/L	20.00	11/14/2005 23:53	
tert-Butyl alcohol (TBA)	ND	100	ug/L	20.00	11/14/2005 23:53	
Methyl tert-butyl ether (MTBE)	2300	10	ug/L	20.00	11/14/2005 23:53	
Di-isopropyl Ether (DIPE)	ND	40	ug/L	20.00	11/14/2005 23:53	
Ethyl tert-butyl ether (ETBE)	ND	40	ug/L	20.00	11/14/2005 23:53	
tert-Amyl methyl ether (TAME)	ND	40	ug/L	20.00	11/14/2005 23:53	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.5	73-130	%	20.00	11/14/2005 23:53	
Toluene-d8	102.4	81-114	%	20.00	11/14/2005 23:53	



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-11-36W</b>	Lab ID: 2005-11-0145 - 36
Sampled: 11/03/2005 15:15	Extracted: 11/12/2005 17:11
Matrix: Water	QC Batch#: 2005/11/12-1A.71
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	67	50	ug/L	1.00	11/12/2005 17:11	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 17:11	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 17:11	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 17:11	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 17:11	
tert-Butyl alcohol (TBA)	22	5.0	ug/L	1.00	11/12/2005 17:11	
Methyl tert-butyl ether (MTBE)	23	0.50	ug/L	1.00	11/12/2005 17:11	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/12/2005 17:11	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/12/2005 17:11	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/12/2005 17:11	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	103.3	73-130	%	1.00	11/12/2005 17:11	
Toluene-d8	98.6	81-114	%	1.00	11/12/2005 17:11	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Water**

**QC Batch # 2005/11/11-1A.64**

MB: 2005/11/11-1A.64-007

Date Extracted: 11/11/2005 08:07

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/11/2005 08:07	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/11/2005 08:07	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/11/2005 08:07	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/11/2005 08:07	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/11/2005 08:07	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/11/2005 08:07	
Benzene	ND	0.5	ug/L	11/11/2005 08:07	
Toluene	ND	0.5	ug/L	11/11/2005 08:07	
Ethylbenzene	ND	0.5	ug/L	11/11/2005 08:07	
Total xylenes	ND	1.0	ug/L	11/11/2005 08:07	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	103.4	73-130	%	11/11/2005 08:07	
Toluene-d8	108.6	81-114	%	11/11/2005 08:07	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Water**

**QC Batch # 2005/11/11-1B.64**

MB: 2005/11/11-1B.64-007

Date Extracted: 11/11/2005 08:07

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/11/2005 08:07	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/11/2005 08:07	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/11/2005 08:07	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/11/2005 08:07	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/11/2005 08:07	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/11/2005 08:07	
Benzene	ND	0.5	ug/L	11/11/2005 08:07	
Toluene	ND	0.5	ug/L	11/11/2005 08:07	
Ethylbenzene	ND	0.5	ug/L	11/11/2005 08:07	
Total xylenes	ND	1.0	ug/L	11/11/2005 08:07	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	103.4	73-130	%	11/11/2005 08:07	
Toluene-d8	108.6	81-114	%	11/11/2005 08:07	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Water**

**QC Batch # 2005/11/11-2C.65**

MB: 2005/11/11-2C.65-005

Date Extracted: 11/11/2005 19:05

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/11/2005 19:05	
Gasoline [Shell]	ND	50	ug/L	11/11/2005 19:05	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/11/2005 19:05	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/11/2005 19:05	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/11/2005 19:05	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/11/2005 19:05	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/11/2005 19:05	
Benzene	ND	0.5	ug/L	11/11/2005 19:05	
Toluene	ND	0.5	ug/L	11/11/2005 19:05	
Ethylbenzene	ND	0.5	ug/L	11/11/2005 19:05	
Total xylenes	ND	1.0	ug/L	11/11/2005 19:05	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	83.2	73-130	%	11/11/2005 19:05	
Toluene-d8	92.2	81-114	%	11/11/2005 19:05	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Water**

**QC Batch # 2005/11/12-1A.64**

MB: 2005/11/12-1A.64-042

Date Extracted: 11/12/2005 07:42

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/12/2005 07:42	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/12/2005 07:42	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/12/2005 07:42	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/12/2005 07:42	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/12/2005 07:42	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/12/2005 07:42	
Benzene	ND	0.5	ug/L	11/12/2005 07:42	
Toluene	ND	0.5	ug/L	11/12/2005 07:42	
Ethylbenzene	ND	0.5	ug/L	11/12/2005 07:42	
Total xylenes	ND	1.0	ug/L	11/12/2005 07:42	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	103.8	73-130	%	11/12/2005 07:42	
Toluene-d8	106.8	81-114	%	11/12/2005 07:42	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Water**

**QC Batch # 2005/11/12-1A.71**

MB: 2005/11/12-1A.71-045

Date Extracted: 11/12/2005 08:45

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/12/2005 08:45	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/12/2005 08:45	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/12/2005 08:45	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/12/2005 08:45	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/12/2005 08:45	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/12/2005 08:45	
Benzene	ND	0.5	ug/L	11/12/2005 08:45	
Toluene	ND	0.5	ug/L	11/12/2005 08:45	
Ethylbenzene	ND	0.5	ug/L	11/12/2005 08:45	
Total xylenes	ND	1.0	ug/L	11/12/2005 08:45	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	104.6	73-130	%	11/12/2005 08:45	
Toluene-d8	107.0	81-114	%	11/12/2005 08:45	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

270 Perkins Street  
Sonoma, CA 95476  
Phone: (707) 268-3813 Fax: (707) 935-6649

Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Water**

**QC Batch # 2005/11/14-1B.69**

MB: 2005/11/14-1B.69-044

Date Extracted: 11/14/2005 07:44

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/14/2005 07:44	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/14/2005 07:44	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/14/2005 07:44	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/14/2005 07:44	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/14/2005 07:44	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/14/2005 07:44	
Benzene	ND	0.5	ug/L	11/14/2005 07:44	
Toluene	ND	0.5	ug/L	11/14/2005 07:44	
Ethylbenzene	ND	0.5	ug/L	11/14/2005 07:44	
Total xylenes	ND	1.0	ug/L	11/14/2005 07:44	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	100.8	73-130	%	11/14/2005 07:44	
Toluene-d8	97.0	81-114	%	11/14/2005 07:44	

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

Attn.: Dennis Baertschi

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Method Blank**

**Water**

**QC Batch # 2005/11/14-2A.62**

MB: 2005/11/14-2A.62-039

Date Extracted: 11/14/2005 18:39

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/14/2005 18:39	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/14/2005 18:39	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/14/2005 18:39	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/14/2005 18:39	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/14/2005 18:39	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/14/2005 18:39	
Benzene	ND	0.5	ug/L	11/14/2005 18:39	
Toluene	ND	0.5	ug/L	11/14/2005 18:39	
Ethylbenzene	ND	0.5	ug/L	11/14/2005 18:39	
Total xylenes	ND	1.0	ug/L	11/14/2005 18:39	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	88.6	73-130	%	11/14/2005 18:39	
Toluene-d8	95.6	81-114	%	11/14/2005 18:39	



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report										
Prep(s): 5030B						Test(s): 8260B				
<b>Laboratory Control Spike</b>			<b>Water</b>			<b>QC Batch # 2005/11/11-1A.64</b>				
LCS	2005/11/11-1A.64-025		Extracted: 11/11/2005			Analyzed: 11/11/2005 07:25				
LCSD	2005/11/11-1A.64-046		Extracted: 11/11/2005			Analyzed: 11/11/2005 07:46				
Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	22.0	21.4	25	88.0	85.6	2.8	65-165	20		
Benzene	22.5	22.4	25	90.0	89.6	0.4	69-129	20		
Toluene	23.7	23.8	25	94.8	95.2	0.4	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	496	491	500	99.2	98.2		73-130			
Toluene-d8	557	545	500	111.4	109.0		81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report			
Prep(s): 5030B		Test(s): 8260B	
<b>Laboratory Control Spike</b>	<b>Water</b>	<b>QC Batch # 2005/11/11-1B.64</b>	
LCS 2005/11/11-1B.64-025	Extracted: 11/11/2005	Analyzed: 11/11/2005 07:25	
LCSD 2005/11/11-1B.64-046	Extracted: 11/11/2005	Analyzed: 11/11/2005 07:46	

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	22.0	21.4	25	88.0	85.6	2.8	65-165	20		
Benzene	22.5	22.4	25	90.0	89.6	0.4	69-129	20		
Toluene	23.7	23.8	25	94.8	95.2	0.4	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	496	491	500	99.2	98.2		73-130			
Toluene-d8	557	545	500	111.4	109.0		81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report										
Prep(s): 5030B							Test(s): 8260B			
<b>Laboratory Control Spike</b>			<b>Water</b>			<b>QC Batch # 2005/11/11-2C.65</b>				
LCS	2005/11/11-2C.65-039		Extracted: 11/11/2005			Analyzed: 11/11/2005 18:39				
LCSD										

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	24.9		25	99.6			65-165	20		
Benzene	25.0		25	100.0			69-129	20		
Toluene	27.0		25	108.0			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	407		500	81.4			73-130			
Toluene-d8	459		500	91.8			81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report			
Prep(s): 5030B		Test(s): 8260B	
<b>Laboratory Control Spike</b>	<b>Water</b>	<b>QC Batch # 2005/11/12-1A.64</b>	
LCS 2005/11/12-1A.64-022	Extracted: 11/12/2005	Analyzed: 11/12/2005 07:22	
LCSD 2005/11/12-1A.64-033	Extracted: 11/12/2005	Analyzed: 11/12/2005 12:33	

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	22.2	20.9	25	88.8	83.6	6.0	65-165	20		
Benzene	22.5	20.8	25	90.0	83.2	7.9	69-129	20		
Toluene	23.7	22.4	25	94.8	89.6	5.6	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	492	496	500	98.4	99.2		73-130			
Toluene-d8	544	550	500	108.8	110.0		81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report										
Prep(s): 5030B							Test(s): 8260B			
<b>Laboratory Control Spike</b>				<b>Water</b>			<b>QC Batch # 2005/11/12-1A.71</b>			
LCS	2005/11/12-1A.71-018			Extracted: 11/12/2005			Analyzed: 11/12/2005 08:18			
LCSD										

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	30.3		25	121.2			65-165	20		
Benzene	24.3		25	97.2			69-129	20		
Toluene	22.8		25	91.2			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	468		500	93.6			73-130			
Toluene-d8	502		500	100.4			81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report									
Prep(s): 5030B						Test(s): 8260B			
<b>Laboratory Control Spike</b>			<b>Water</b>			<b>QC Batch # 2005/11/14-1B.69</b>			
LCS	2005/11/14-1B.69-002		Extracted: 11/14/2005			Analyzed: 11/14/2005 07:02			
LCSD	2005/11/14-1B.69-023		Extracted: 11/14/2005			Analyzed: 11/14/2005 07:23			

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	26.1	26.5	25	104.4	106.0	1.5	65-165	20		
Benzene	23.5	23.9	25	94.0	95.6	1.7	69-129	20		
Toluene	24.8	24.5	25	99.2	98.0	1.2	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	447	473	500	89.4	94.6		73-130			
Toluene-d8	485	497	500	97.0	99.4		81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report									
Prep(s): 5030B						Test(s): 8260B			
<b>Laboratory Control Spike</b>			<b>Water</b>			<b>QC Batch # 2005/11/14-2A.62</b>			
LCS	2005/11/14-2A.62-012		Extracted: 11/14/2005			Analyzed: 11/14/2005 18:12			
LCSD	2005/11/14-2A.62-005		Extracted: 11/14/2005			Analyzed: 11/14/2005 19:05			

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	24.5	21.4	25	98.0	85.6	13.5	65-165	20		
Benzene	23.3	25.0	25	93.2	100.0	7.0	69-129	20		
Toluene	26.5	25.6	25	106.0	102.4	3.5	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	434	420	500	86.8	84.0		73-130			
Toluene-d8	512	497	500	102.4	99.4		81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report											
Prep(s): 5030B						Test(s): 8260B					
<b>Matrix Spike ( MS / MSD )</b>				<b>Water</b>				<b>QC Batch # 2005/11/11-2C.65</b>			
MS/MSD						Lab ID: 2005-11-0164 - 004					
MS: 2005/11/11-2C.65-042			Extracted: 11/11/2005			Analyzed: 11/11/2005 19:42			Dilution: 1.00		
MSD: 2005/11/11-2C.65-009			Extracted: 11/11/2005			Analyzed: 11/11/2005 20:09			Dilution: 1.00		

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	22.7	19.4	ND	25	90.8	77.6	15.7	65-165	20		
Benzene	23.6	20.4	ND	25	94.4	81.6	14.5	69-129	20		
Toluene	25.7	22.1	ND	25	102.8	88.4	15.1	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	391	405		500	78.2	81.0		73-130			
Toluene-d8	459	464		500	91.8	92.8		81-114			



**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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Sonoma, CA 95476  
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Project: 247-0467-009  
97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report											
Prep(s): 5030B						Test(s): 8260B					
<b>Matrix Spike ( MS / MSD )</b>				<b>Water</b>				<b>QC Batch # 2005/11/12-1A.64</b>			
MS/MSD						Lab ID: 2005-11-0175 - 006					
MS: 2005/11/12-1A.64-027			Extracted: 11/12/2005			Analyzed: 11/12/2005 10:27			Dilution: 1.00		
MSD: 2005/11/12-1A.64-048			Extracted: 11/12/2005			Analyzed: 11/12/2005 10:48			Dilution: 1.00		

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	21.8	19.5	ND	25	87.2	78.0	11.1	65-165	20		
Benzene	23.1	21.3	ND	25	92.4	85.2	8.1	69-129	20		
Toluene	24.6	21.2	ND	25	98.4	84.8	14.8	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	493	504		500	98.6	100.8		73-130			
Toluene-d8	553	550		500	110.6	110.0		81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report			
Prep(s): 5030B	Test(s): 8260B		
<b>Matrix Spike ( MS / MSD )</b>	<b>Water</b>	<b>QC Batch # 2005/11/12-1A.71</b>	
S-13-6.25W >> MS		Lab ID:	2005-11-0145 - 011
MS: 2005/11/12-1A.71-002	Extracted: 11/12/2005	Analyzed:	11/12/2005 10:02
		Dilution:	50.00
MSD: 2005/11/12-1A.71-029	Extracted: 11/12/2005	Analyzed:	11/12/2005 10:29
		Dilution:	50.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	5040	5020	4100	1250	75.2	73.6	2.2	65-165	20		
Benzene	1220	1140	ND	1250	97.6	91.2	6.8	69-129	20		
Toluene	1160	1080	ND	1250	92.8	86.4	7.1	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	460	459		500	92.0	91.8		73-130			
Toluene-d8	517	508		500	103.4	101.6		81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

Cambria Environmental Sonoma

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97564701

Received: 11/07/2005 14:13

Site: 1601 Webster Street, Alameda, CA

Batch QC Report			
Prep(s): 5030B	Test(s): 8260B		
<b>Matrix Spike ( MS / MSD )</b>	<b>Water</b>	<b>QC Batch # 2005/11/14-2A.62</b>	
MS/MSD		Lab ID:	2005-11-0186 - 005
MS: 2005/11/14-2A.62-031	Extracted: 11/14/2005	Analyzed:	11/14/2005 19:31
		Dilution:	1.00
MSD: 2005/11/14-2A.62-057	Extracted: 11/14/2005	Analyzed:	11/14/2005 19:57
		Dilution:	1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	23.5	20.2	ND	25	94.0	80.8	15.1	65-165	20		
Benzene	22.3	21.3	ND	25	89.2	85.2	4.6	69-129	20		
Toluene	25.2	23.5	ND	25	100.8	94.0	7.0	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	427	416		500	85.4	83.2		73-130			
Toluene-d8	477	491		500	95.4	98.2		81-114			

**Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)**

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97564701

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Site: 1601 Webster Street, Alameda, CA

**Legend and Notes**

**Analysis Flag**

L2

Reporting limits were raised due to high level of analyte present in the sample.

Shell Project Manager to be invoiced:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT HOUSTON

Denis Brown

2005-11-0145

INCIDENT NUMBER (S&E ONLY)

9 7 5 6 4 7 0 1

SAP or CRMT NUMBER (TS/CRMT)

1 3 5 0 3 2

DATE: 10/31/05

Page 1 of 4

SAMPLING COMPANY: <b>Cambria Environmental</b>		LOG CODE: <b>CETS</b>	SITE ADDRESS (Street and City): <b>1601 Webster Street, Alameda, CA</b>		GLOBAL ID NO: <b>T0600137103</b>
ADDRESS: <b>Perkins Street, Sonoma CA</b>		EDF DELIVERABLE TO (Responsible Party or Designee): <b>shellsomomaedf@cambria-env.com</b>		PHONE NO.: <b>707-933-2370</b>	E-MAIL: <b>Dbaertchi@cambria-env.com</b>
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Denis Baertchi / Stu Dalie</b>		SAMPLER NAME(S) (Print): <b>Stu Dalie</b>		CONSULTANT PROJECT NO.: <b>247-0467-009</b>	
TELEPHONE: <b>707-268-3810</b>	FAX: <b>707-268-8180</b>	E-MAIL: <b>Dbartchi@cambria-env.com</b>		LAB USE ONLY	

TURNAROUND TIME (BUSINESS DAYS):  
 10 DA  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS

LA - RWQCB REPORT FORM  UST AGENCY:

GC/MS MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED   
 please cc lab results to dbaertchi@cambria-env.com and sdalie@cambria-env.com

REQUESTED ANALYSIS

TPHg (EPA Method 8260)	BTEX (EPA Method 8260)	TBA (EPA Method 8260)	MTBE (8260B - 0.5ppb RL)	5 oxygenates	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B-)	Test for Disposal, see attached	TPH - Diesel, Extractable (8015m)	MTBE (8260B) Confirmation, See Note	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
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LA #	US	Field Sample Identification		SAMPLING		MATRIX	NO. OF CONT.	TPHg (EPA Method 8260)	BTEX (EPA Method 8260)	TBA (EPA Method 8260)	MTBE (8260B - 0.5ppb RL)	5 oxygenates	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B-)	Test for Disposal, see attached	TPH - Diesel, Extractable (8015m)	MTBE (8260B) Confirmation, See Note	On ICE; Field point ID
		DATE	TIME	TEMPERATURE ON RECEIPT C°																							
1		S-2-5.0	10/31	930	SO	1	X	X			X																2
2		SB-10-5.0	10/31	1020	SO	1	X	X			X																
3		S-3-5.0	10/31	1100	SO	1	X	X			X																
4		SB-9-5.0	11	1155	SO	1	X	X			X																
5		S-4-5.0	11	1215	SO	1	X	X			X																
6		SB-11-5.0	11	1315	SO	1	X	X			X																
7		S-5-5.0	10/31	1345	SO	1	X	X			X																
8		S-6-5.0	10/31	1515	SO	1	X	X			X																
9		S-7-5.0	10/31	1600	SO	1	X	X			X																

Relinquished by: (Signature)	Received by: (Signature)	Date: 10/31/05	Time: 6 pm
Relinquished by: (Signature)	Received by: (Signature)	Date: 11/7/05	Time: 10:30 AM
Relinquished by: (Signature)	Received by: (Signature)	Date: 11/7/05	Time: 11/07/05

Shell Project Manager to be invoiced:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT HOUSTON

Denis Brown

2005-11-0145

INCIDENT NUMBER (S&E ONLY)

9 7 5 6 4 7 0 1

SAP or CRMT NUMBER (TS/CRMT)

1 3 5 0 3 2

DATE: 11/2/05

Page 2 of 4

SAMPLING COMPANY: <b>Cambria Environmental</b>		LOG CODE: <b>CETS</b>	SITE ADDRESS (Street and City): <b>1601 Webster Street, Alameda, CA</b>		GLOBAL ID NO.: <b>T0600137103</b>
ADDRESS: <b>Perkins Street, Sonoma CA</b>		EDF DELIVERABLE TO (Responsible Party or Designee): <b>shellsomomaedf@cambria-env.com</b>		PHONE NO.: <b>707-933-2370</b>	E-MAIL: <b>g.friel@cambria-env.com</b>
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Denis Baertchi / Stu Dalie (A. Friel)</b>		CONSULTANT PROJECT NO.: <b>247-0467</b>		LAB USE ONLY	
TELEPHONE: <b>707-268-3813</b>	FAX: <b>707-268-8180</b>	E-MAIL: <b>dbaertsch@cambria-env.com</b>		SAMPLER NAME(S) (Print): <b>Stu Dalie</b>	

TURNAROUND TIME (BUSINESS DAYS):  
 10 DA  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS

LA - RWQCB REPORT FORM  UST AGENCY:

GC/MS MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED

please cc lab results to **dbaertsch@cambria-env.com** and **sdalie@cambria-env.com**

REQUESTED ANALYSIS

LAB USE	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPHg (EPA Method 8260)	BTEX (EPA Method 8260)	TBA (EPA Method 8260)	MTBE (EPA Method 8260)	5 oxygenates (see book 5/14/05)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B-)	Test for Disposal, see attached	TPH - Diesel, Extractable (8015m)	MTBE (8260B) Confirmation, See Note	TEMPERATURE ON RECEIPT C°
		DATE	TIME																						
10	SB-12-5	11/2/5	9 <sup>30</sup>	Soil	1	X	X	X	X	X															
11	SB-12-6.25W	11/2/5	9 <sup>30</sup>	Soil	4 UVA	X	X	X	X	X															
12	SB-12-5	11/2/5	10 <sup>15</sup>	Soil	1	X	X	X	X	X															
13	SB-12-6.5W	11/2/5	10 <sup>30</sup>	Soil	4 UVA	X	X	X	X	X															
14	SB-13-15W	11/2/5	11 <sup>10</sup>	↓	4 UVA	X	X	X	X	X															
15	SB-13-25W	11/2/5	11 <sup>20</sup>	↓	4 UVA	X	X	X	X	X															
16	SB-13-36W	11/2/5	11 <sup>30</sup>	↓	4 UVA	X	X	X	X	X															
17	SB-12-15W	↓	2 <sup>00</sup>	↓	↓																				
18	SB-12-25W	↓	2 <sup>20</sup>	↓	↓																				
19	SB-12-36W	↓	2 <sup>40</sup>	↓	↓																				

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

On ICE; Field point ID

Relinquished by: (Signature)	Received by: (Signature)	Date: 11/7/5	Time: 6 pm
Relinquished by: (Signature)	Received by: (Signature)	Date: 11/7/5	Time: 10 <sup>30</sup> am
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client

Relinquished by: [Signature] 11/7/05

[Signature]

11/7/05

1900

10/16/00 Revision

Shell Project Manager to be invoiced: **Denis Brown**

SCIENCE & ENGINEERING  
 TECHNICAL SERVICES  
 CRMT HOUSTON

**2005-11-0145**

INCIDENT NUMBER (S&E ONLY)  
 9 7 5 6 4 7 0 1

SAP or CRMT NUMBER (TS/CRMT)  
 1 3 5 0 3 2

DATE: 11/2 /05

Page 3 of 4

SAMPLING COMPANY: **Cambria Environmental** LOG CODE: **CETS** SITE ADDRESS (Street and City): **1601 Webster Street, Alameda, CA** GLOBAL ID NO.: **T0600137103**

ADDRESS: **Perkins Street, Sonoma CA** EDF DELIVERABLE TO (Responsible Party or Designee): **shellsonomaedf@cambria-env.com** PHONE NO.: **707-933-2370** E-MAIL: **afriel** CONSULTANT PROJECT NO.: **247-0467**

PROJECT CONTACT (Hardcopy or PDF Report to): **Denis Baertchi / Stu Dalie (Afriel)** SAMPLER NAME(S) (Print): **Stu Dalie**

TELEPHONE: **707-268-3813** FAX: **707-268-8180** E-MAIL: **dbaertschi@cambria-env.com**

TURNAROUND TIME (BUSINESS DAYS):  
 10 DA  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS

LA - RWQCB REPORT FORM  UST AGENCY:

GC/MS MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED   
 please cc lab reults to **dbaertschi@cambria-env.com** and **sdalie@cambria-env.com**

REQUESTED ANALYSIS

Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPHg (EPA Method 8260)	BTEX (EPA Method 8260)	TBA (EPA Method 8260)	5 oxygenates	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B)	Test for Disposal, see attached	TPH - Diesel, Extractable (8015m)	MTBE (8260B) Confirmation, See Note	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes	
20 SB-10-7 W	11/2/5	3:45	170	4 UUA	X	X		X															On ICE; Field point ID TEMPERATURE ON RECEIPT C° 21	
21 SB-10-15 W		4:20																						
22 SB-10-25 W		4:40																						
23 SB-10-36 W		5:00																						
24 SB-11-5	11/3/5	9:15	Soil	1	X	X		X																
25 SB-11-5.75 W		9:45	150	4 UUA	X	X		X																
26 SB-11-15 W		10:15	150		X	X		X																
27 SB-11-27 W		10:30																						
28 SB-11-36 W		11:00																						
29 SB-11-6.5 W		11:30	150	4 UUA	X	X		X																

Relinquished by: (Signature) \_\_\_\_\_ Received by: (Signature) \_\_\_\_\_ Date: 11/2/5 Time: \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Received by: (Signature) \_\_\_\_\_ Date: 11/7/5 Time: 10:30 AM

Relinquished by: (Signature) \_\_\_\_\_ Received by: (Signature) \_\_\_\_\_ Date: 11/7/5 Time: \_\_\_\_\_

Shell Project Manager to be invoiced:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT HOUSTON

Denis Brown

2005-11-0145

INCIDENT NUMBER (S&E ONLY)

9 7 5 6 4 7 0 1

SAP or CRMT NUMBER (TS/CRMT)

4 3 5 0 9 2

DATE: 11/3/05

Page 4 of 4

SAMPLING COMPANY: <b>Cambria Environmental</b>		LOG CODE: <b>CETS</b>	SITE ADDRESS (Street and City): <b>1601 Webster Street, Alameda, CA</b>		GLOBAL ID NO.: <b>T0600137103</b>
ADDRESS: <b>Perkins Street, Sonoma CA</b>		EDF DELIVERABLE TO (Responsible Party or Designee): <b>shellsonomaedf@cambria-env.com</b>		PHONE NO.: <b>707-933-2370</b>	E-MAIL: <b>gafriel</b>
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Denis Baertchi / Stu Dalie</b>		SAMPLER NAME(S) (Print): <b>Stu Dalie</b>		CONSULTANT PROJECT NO.: <b>247-0467</b>	
TELEPHONE: <b>707-268-3813</b>	FAX: <b>707-268-8180</b>	E-MAIL: <b>Dbuertchi@cambria-env.com</b>		LAB USE ONLY	

TURN AROUND TIME (BUSINESS DAYS):  
 10 DAYS  5 DAYS  72 HOURS  48 HOURS  24 HOURS  LESS THAN 24 HOURS

LA - RWQCB REPORT FORM  UST AGENCY: \_\_\_\_\_

GC/MS MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED

please cc lab results to [dbuertchi@cambria-env.com](mailto:dbuertchi@cambria-env.com) and [sdalie@cambria-env.com](mailto:sdalie@cambria-env.com)  
*gafriel*

REQUESTED ANALYSIS

LA #	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPHg (EPA Method 8260)	BTEX (EPA Method 8260)	TBA (EPA Method 8260)	MTBE (8260B - 0.5ppb RL)	5 oxygenates	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B-)	Test for Disposal, see attached	TPH - Diesel, Extractable (8015m)	MTBE (8260B) Confirmation, See Note	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
		DATE	TIME																						
30	SB-9-15W	11/3/05	1150	40	1	X	X		X																On ICE: Field point ID TEMPERATURE ON RECEIPT C° 2
31	SB-9-27W		1210		1																				
32	SB-9-36W		1230		1																				
33	SB-11-7W		145		1																				
34	SB-11-15W		220		1																				
35	SB-11-27W		300		1																				
36	SB-11-36W		315		1																				

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: 11/3/05	Time: 20
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: 11/7/05	Time: 16:30 PM
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: 11/7/05	Time: 16:30 PM