



76 Broadway  
Sacramento, California 95818

**RECEIVED**

1:39 pm, Oct 07, 2009

Alameda County  
Environmental Health

September 28, 2009

Barbara Jakub  
Alameda County Health Agency  
1131 Harbor Bay parkway, Suite250  
Alameda, California 94502-577

Re: ***Ozone Injection Feasibility Testing Report***  
**Former 76 Service Station # 0843 RO # 0450**  
**1629 Webster Street**  
**Alameda, CA**

Dear Ms. Jakub:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

**We look forward to reviewing this report and the plan next stages for development of this property with your group, and the owners on October 21, 2009.**

If you have any questions or need additional information, please call me at (916) 558-7666.

Sincerely,

Terry L. Grayson  
Site Manager  
Risk Management & Remediation

September 30, 2009

Ms. Barbara Jakub  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

**RE: Ozone Injection Feasibility Testing Report**  
Former 76 Service Station No. 2349 (0843)  
1629 Webster Street  
Alameda, California



Dear Ms. Jakub:

On behalf of ConocoPhillips Company (ConocoPhillips), Delta Consultants (Delta) is submitting this *Ozone Injection Feasibility Testing Report* for the former 76 Station No. 2349 (0843) in Alameda, California. Approval for this work was granted in an Alameda County Environmental Health Care Service Agency (ACHSA) letter to ConocoPhillips dated June 18, 2009. (Appendix A).

Please contact James Barnard at (916) 503-1279 if you have questions.

Sincerely,

**DELTA CONSULTANTS**

James B. Barnard  
Senior Project Manager  
California Registered Professional Geologist No. 7478



Enclosure

cc: Terry Grayson, ConocoPhillips (electronic copy only)

**OZONE INJECTION FEASIBILITY TESTING REPORT**

**FORMER 76 SERVICE STATION NO. 2349 (0843)  
1629 WEBSTER STREET  
ALAMEDA, CALIFORNIA**

**September 30, 2009**

**Prepared for**

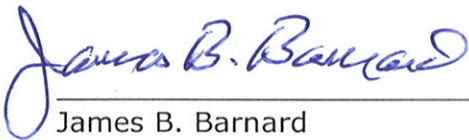
**ConocoPhillips Company  
76 Broadway  
Sacramento, California**

The material and data in this report were prepared under the supervision and direction of the undersigned.

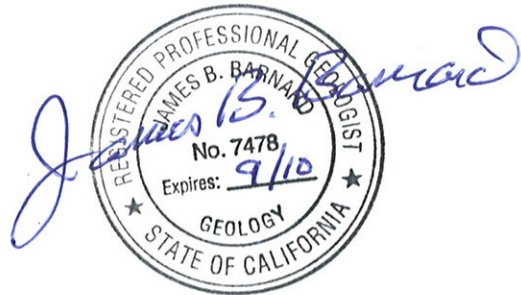
**Delta Consultants**



Stephen Meninger  
Project Geologist



James B. Barnard  
California Registered Professional Geologist No. 7478



## **INTRODUCTION**

On behalf of ConocoPhillips, Delta has prepared this report for the Former 76 Service Station No. 2349 (0843) located at 1629 Webster Street, Alameda, California (Figure 1). A description of the proposed work was presented in Delta's *Ozone Injection Feasibility Testing Work Plan* dated June 1, 2009. Approval for this work was granted in an Alameda County Health Care Services Agency (ACHSA) letter to ConocoPhillips dated June 18, 2009. A copy of the ACHSA letter is provided as Appendix A. The purpose of this report is to provide a summary of the feasibility testing activities conducted at the former 76-service station depicted in Figure 2.

## **SITE BACKGROUND AND PREVIOUS ENVIRONMENTAL WORK**

June 1998 - Tosco Marketing Company (Tosco, now ConocoPhillips) exhumed and removed two 10,000-gallon gasoline underground storage tanks (USTs), one 550-gallon used oil UST, product lines, and fuel dispensers. Two holes approximately  $\frac{3}{4}$ -inch in diameter were observed in the used oil tank during removal. Approximately 338 tons of hydrocarbon impacted soil and backfill were removed from beneath the former USTs, fuel dispensers, and product lines during the UST removal activities.

March 1999 – Four soil borings (B1 through B4) were advanced at the site and converted to monitor wells MW-1 through MW-4 (Figure 2A). Groundwater was encountered from 8 to 15 feet below ground surface (bgs). Static groundwater was observed at depths ranging from 4 and 6 feet bgs subsequent to well installation.

December 1999 – Two off-site soil borings (B5 and B6) were advanced and subsequently converted to monitor wells MW-5 and MW-6. Groundwater was initially present at approximately 10 feet bgs. Static groundwater was observed at a depth of approximately 7 feet bgs subsequent to well installation.

March 2001 - An underground utility survey was conducted to identify and locate underground utilities beneath and in the vicinity of the site that could provide potential preferential pathways for groundwater flow.

May 2001 - Five direct-push soil borings (GP-1 through GP-5) were advanced to evaluate whether underground utilities in the vicinity of the site are providing preferential pathways for groundwater flow and the migration of dissolved phase hydrocarbons. The results of the investigation indicated insufficient evidence that underground utility lines were providing preferential pathways for the off-site migration of dissolved phase hydrocarbons.

December 2001 - Twelve direct-push soil borings (GP-6 through GP-17) were advanced to further assess the extent of residual hydrocarbons in the vadose

zone beneath the site. The results of the investigation indicated that the extent of the residual hydrocarbon impact reported in the previous investigations was limited.

December 2002 - One on-site monitoring well (MW-2) was destroyed during remedial excavation of hydrocarbon-impacted soil. Prior to destruction, monitoring well MW-2 was located near the former eastern dispenser island. During the remedial excavation, monitoring well MW-2 was replaced with on-site backfill monitoring well MW-2A. Approximately 292 tons of hydrocarbon-impacted soil were removed from beneath the former eastern dispenser island.

September 2003 - A *Request and Work Plan for Closure* prepared by ERI was submitted to the Alameda County Health Care Services Agency (ACEH), dated September 10, 2003. The report summarized why no further action is needed for the site; the report also included plans to destroy the existing wells upon regulatory acceptance for no further action. Closure was not granted.

June 2004 - A work plan was submitted for the installation of two additional monitor wells down-gradient of MW-5.

May 2005 - A work plan titled *Work Plan Addendum - Site Assessment Activity* dated May 17, 2005 was prepared by ATC Associates Inc. (ATC) for the installation of two off-site monitor wells.

September 2005 - A work plan was prepared by ATC titled *Work Plan Subsurface Investigation*, for the installation of one on-site monitor well.

September 2005 - Site environmental consulting responsibilities were transferred to Delta.

January 24, 2007 - Delta submitted a work plan to the ACEH recommending the advancement of one soil boring and the installation of three ozone injection wells at the site.

August 14, 2008 - Gregg Drilling, under the supervision of a Delta field geologist advanced one soil boring to a depth of 55 feet bgs. The details of this investigation are described in the *Site Investigation Report* dated October 29, 2008.

May 12 through May 28, 2009 - As proposed in Delta's Work Plan *Site Investigation and Well Installations*, dated March 16, 2009, a total of seven groundwater monitoring wells (MW-1AR, MW-1BR, MW-7, MW-8, MW-9, MW-10, MW-11) and one injection point well (TSP-1) were installed at the site. One onsite monitoring well (MW-2A) was abandoned. Monitoring well MW-1 has been temporarily retained as the most up-gradient well. Details of this

investigation are presented under a separate cover in the *Site Investigation and Well Installation* report, dated July 7, 2009.

### **SENSITIVE RECEPTORS**

June/July 2002 - A groundwater receptor survey was conducted. Three irrigation wells were located within a one-half mile radius of the site. The wells are located approximately 1,980 feet west and 2,245 feet southwest of the site, cross-gradient and up-gradient of the site.

November 2006 - A survey entailing a visit to the DWR office in Sacramento was conducted to examine well log records and to identify domestic wells within the survey area. The DWR survey provided 15 potential receptors within one mile of the site; one domestic well located 0.5 mile southwest of the site; one domestic/irrigation well located 0.7 mile southeast of the site; 11 irrigation wells- three, located 0.1 mile northwest, west, and southeast of the site; and two industrial wells located 0.3 miles southwest and 0.9 mile northeast of the site.

### **SITE GEOLOGY**

The subject site is located on an island in the eastern portion of the San Francisco Bay and is underlain by interbedded Holocene age marine beach and near shore deposits. These deposits are composed of unconsolidated sands and semi-consolidated deposits of well-graded to poorly-graded sand, silty sand/sandy silt, silt, and clayey sand.

Previous site investigations indicate that the subsurface lithology onsite is consistent with that described above (sand, silty sand/sandy silt, and silt) to the maximum depth explored, approximately 55 feet bgs.

### **SITE HYDROGEOLOGY**

Field boring data indicate that first water encountered was at depths between 9.5 feet below ground surface (bgs) (MW-7) to 19 feet bgs (MW-10). First water could not be determined in borings MW-1AR, MW-1BR, MW-10, and TSP-1. This was due to a quickly rising column of sand up the annular space of the auger at depths of 17.5 feet bgs to 20.5 feet bgs. This type of sand rising under pressure is called heaving sands. Heaving sands are indicative of a pressurized, confined aquifer. The confinement layer appears to be very silty sand or clayey sand with compacted pore spaces that essentially traps this pressurized aquifer within a defined zone. These heaving sands have not been documented in any previous boring investigation at this site.

Quarterly groundwater monitoring and sampling was initiated in March 1999. Monitoring wells MW-1AR, MW-1BR, MW-7, MW-8, MW-9, MW-10, and MW-11 were added to the well network during the second quarter 2009. During

the most recent (third quarter 2009) groundwater monitoring and sampling event conducted by TRC September 14, 2009, depth to groundwater ranged from 6.29 feet (MW-5) to 7.83 (MW-1AR) below top of casing (TOC). The groundwater flow direction was interpreted to be to the northeast, at a gradient of 0.005 foot per foot (ft/ft), as compared to the previous quarterly sampling event when the groundwater flow direction was interpreted to be to the east with a gradient of 0.02 ft/ft (May 28, 2009). A historical groundwater flow direction (Rose) diagram is included as Figure 3.

## **OZONE INJECTION FEASIBILITY TESTING ACTIVITIES**

On June 1, 2009 Delta submitted an *Ozone Injection Feasibility Testing Work Plan* to the ACHSA. This work plan proposed the injection of ozone into injection test point TSP-1 and monitoring of depth to water (DTW), dissolved oxygen (DO), and oxygen reducing potential (ORP) in surrounding monitoring wells MW-1AR, MW-1BR, MW-7, MW-8, MW-9, MW-10, and MW-11 (Figure 2). Approval for the described work was granted in an ACHSA letter to COP, dated June 18, 2009 (Appendix A).

### **Pre field activities**

Before commencing field operations Delta obtained necessary access agreements, and prepared a site-specific Health and Safety Plan in accordance with state and federal requirements, for use during site assessment activities. Additionally, Integral Engineering Services (Integral) prepared a site-specific Health and Safety Plan in accordance with state and federal requirements, for use during site assessment activities.

### **Scope of Assessment Field Work**

During a four week period from August 10, 2009 to September 4, 2009, Integral, with oversight by Delta, performed a daily ozone injection feasibility test. The feasibility testing included the continuous injection of ozone into test point TSP-1 for eight hours per day at a rate of 0.45 lbs of ozone per day. Depth to water, DO, and ORP were monitored and recorded before, during, and after the injection in surrounding on-site monitoring wells MW-1AR, MW-1BR, MW-7, MW-8, MW-9, MW-10, and MW-11. Additionally, operating flow rates in cubic feet per minute (cfm) and operating pressure in pounds per square inch (psi) were monitored and recorded on the mobile injection unit. Field data sheets completed by Integral during feasibility testing activities are included as Appendix B.

### **Confirmation Testing of Groundwater**

To better quantify the effectiveness of the ozone injection feasibility testing, confirmation groundwater samples were collected and analyzed for TPHg by CG/MS, BTEX, and MTBE, and fuel oxygenates by EPA Method 8260B.

Selected wells were also analyzed for ferrous iron by EPA Method 3500, total and hexavalent chromium by EPA Method 6010, dissolved and total manganese by EPA Method 200.8, nitrate and sulfate by EPA Method 300.0, total organic carbon by EPA Method 415.1, specific conductivity by EPA Method 120.1, dissolved oxygen by EPA Method 4500, and oxygen reducing potential by ASTM D1948. Additionally, pre-purge and post-purge DO and ORP measurements were collected in the field during sampling activities. The groundwater samples were collected ten days after the completion of the ozone injection feasibility testing activities. Groundwater samples were collected by TRC on September 14, 2009 as part of the regularly scheduled third quarter 2009 groundwater monitoring and sampling event. TRC's *Quarterly Monitoring Report – July through September 2009*, dated September 28, 2009 has been included as Appendix C. Analytical results of the confirmation groundwater sampling are also presented in Table 1.

### **Handling of Generated Waste**

Decontamination wastewater generated during feasibility testing activities was placed into four properly labeled 55-gallon Department of Transportation (DOT) approved steel drums and stored on-site. At the issuance of this report the drums have been characterized, but have not yet been removed from the site by Belshire Environmental Services.

## **SUMMARY OF FINDINGS**

### **Parameter Monitoring During Injection Activities**

DTW, DO, and ORP readings were collected daily before injection activities, approximately four hours into injection activities, and immediately after the injection activities were completed. Below is a summary for readings recorded in wells MW-1AR, MW-1BR, MW-7, MW-8, MW-9, MW-10, and MW-11. Field data sheets completed during feasibility testing activities are included as Appendix B.

Monitoring well MW-9 is located approximately 8 feet northeast from test point TSP-1, closer than any of the other observed wells. During the injection activities, bubbling in the well was observed. DTW, DO, and ORP measurements were not able to be recorded during the injection due to unstable readings. However, DTW and DO measurements showed a significant increase between the pre-injection and post-injection readings. It appears that injection activities had the greatest influence on well MW-9.

Monitoring wells MW-10 and MW-11 are located approximately 15 feet north and 15 feet east, respectively, of test point TSP-1. In general, DO and ORP readings would be greater during the injection than pre-injection. Once the daily injections had stopped, the DO and ORP readings would either remain



relatively stable or continue to rise in comparison to the readings collected during the daily injection.

Monitoring wells MW-1AR and MW-1BR are located 10 feet to 15 feet southwest of test point TSP-1. In general, DO and ORP readings would be greater during the injection than pre-injection. Once the daily injections had stopped, the DO and ORP readings would either remain relatively stable or continue to rise in comparison to the readings collected during the daily injection. The differences in DTW, DO, and ORP readings were generally the same as those observed in wells MW-9 and MW-10, and it appears that the injection activities did have an influence in these wells.

Monitoring wells MW-7 and MW-8 are located approximately 50 feet to 60 feet northeast of test point TSP-1. In general, the differences in DTW, DO, and ORP reading before, during, and after the daily injections was less than the observed differences in wells MW-1AR, MW-1BR, MW-9, MW-10, and MW-11. However, differences were observed in these wells and it appears the radius of influence due to injection activities extends to at least MW-7 and MW-8, if not farther.

During injection activities into test point TSP-1, operating pressures and flow rates were monitored and recorded. In general, the unit injected ozone at flow rates between 2.2 cfm and 2.8 cfm at pressures between 18 psi and 26 psi. The range of observed flow rates and pressures were all within normal operating ranges. However, during the injection activities on August 10, 2009 operating flow rates were reduced to 1.8 cfm due to bubbling in MW-9 approaching the top of the well casing. As stated above and shown in the field data sheets (Appendix B), the observed bubbling in MW-9 was constant throughout the feasibility testing and required constant adjustment and monitoring of operating flow rates and pressures.

### **Confirmation Groundwater Sampling**

Confirmation groundwater samples were collected by TRC on September 14, 2009 as part of the regularly scheduled third quarter 2009 monitoring and sampling event. TRC's *Quarterly Monitoring Report – July through September 2009*, dated September 28, 2009, has been included as Appendix C. The feasibility testing analytical results, as well as the analytical results from the previous two quarters, is summarized on Table 1.

Groundwater analytical results indicate that TPH-G was reported in monitoring wells MW-1 (1,700 µg/L), MW-1AR (480 µg/L), MW-1BR (450 µg/L), MW-6 (230 µg/L), MW-7 (7,900 µg/L), MW-8 (3,500 µg/L), MW-9 (280 µg/L), MW-10 (3,300 µg/L), and MW-11 (11,000 µg/L) during the current event. All wells, with the exception MW-9, showed a significant increase in reported concentrations since the last quarter. However, the lab indicates that during the current event, and all previous historical events,

that the TPH-G does not exhibit a gasoline pattern, and the reported concentrations are entirely due to MTBE. This is confirmed by the fact that benzene, toluene, ethylbenzene, and xylenes were all below the laboratory's indicated reporting limits for all wells.

Remediation of the on-site MTBE plume was the main focus of the ozone injection feasibility testing. During the current event, MTBE was reported in nine of the twelve wells at concentrations ranging from 310 µg/L (MW-6) to 18,000 µg/L (MW-11). Ozone injection activities reduced MTBE concentrations from the previous event in wells MW-1 (from 4,100 µg/L to 2,100 µg/L), MW-1AR (930 µg/L to 890 µg/L), MW-1BR (810 µg/L to 680 µg/L), MW-8 (13,000 µg/L to 5,600 µg/L), and MW-9 (13,000 µg/L to 390 µg/L). However, MTBE concentration since the previous event have rose in wells MW-6 (from 290 µg/L to 310 µg/L), MW-10 (3,500 µg/L to 4,900 µg/L), and MW-11 (15,000 µg/L to 18,000 µg/L) and stayed consistent in well MW-7 (15,000 µg/L).

During the current monitoring and sampling event, total chromium was reported in eight of the eight wells in which the analysis was performed at concentration ranging from 14 µg/L (MW-11) to 520 µg/L (MW-9). Hexavalent chromium was reported only in one of the eight wells in which it was analyzed for at a concentration of 2.2 µg/L (MW-1). The differences in the reported concentrations of total chromium and hexavalent chromium indicated that ozone injection activities do not convert chromium to hexavalent chromium at the site, and therefore the activities do not pose a risk to human health.

During the current sampling event, all twelve wells which were monitored and sampled also were field measured for post-purge DO and ORP. Field measurements indicate that DO is present in the on-site and off-site groundwater at concentrations ranging from 0.26 mg/L (MW-7) to 3.58 mg/l (MW-9). Measurements performed in the laboratory for all wells indicate DO are present at concentrations ranging from 4.0 mgO/L (MW-5) to 7.1 mgO/L (MW- 4 and MW-6). Field measurements of ORP indicate concentration ranging from -53 mV (MW-7) to 171 mV (MW-9). Laboratory measurements indicate ORP concentration ranging from 192 mV (MW-11) to 407 mV (MW-9). Field and laboratory measurement of DO and ORP indicate that DO and ORP reading show inconsistent changes since the beginning of the feasibility testing, with DO and ORP levels both lower and higher than the previous monitoring and sampling event. Post-purge DO and ORP, as well as laboratory DO and ORP, measurements from the previous three monitoring and sampling events are summarized with the feasibility testing analytical results on Table 1.

## **CONCLUSIONS AND RECOMMENDATIONS**

During a four week period from August 10, 2009 to September 4, 2009, Integral, with oversight by Delta, performed a daily ozone injection feasibility test. Confirmation groundwater samples were collected by TRC on September 14, 2009 as part of the regularly scheduled third quarter 2009 monitoring and sampling event.

Remediation of the on-site MTBE plume was the main focus of the ozone injection feasibility testing. Ozone injection activities reduced MTBE concentrations from the previous event in wells MW-1 (from 4,100 µg/L to 2,100 µg/L), MW-1AR (930 µg/L to 890 µg/L), MW-1BR (810 µg/L to 680 µg/L), MW-8 (13,000 µg/L to 5,600 µg/L), and MW-9 (13,000 µg/L to 390 µg/L). However, MTBE concentration since the previous event have rose in wells MW-6 (from 290 µg/L to 310 µg/L), MW-10 (3,500 µg/L to 4,900 µg/L), and MW-11 (15,000 µg/L to 18,000 µg/L) and stayed consistent in well MW-7 (15,000).

It appears the ozone injection activities have had an immediate positive effect in the wells closet to the injection well TSP-1 (MW-1, MW-1AR, MW-1BR, and MW-9). The immediate radius of influence appears to be approximately 10 to 15 feet in all directions. However, it appears that the injection activities forced the center of the MTBE plume outward, as shown by the increased concentration in MW-10 and MW-11. The decrease in MTBE concentrations appears to an anomaly, or may be attributed to a preferential pathway between TSP-1 and MW-8. Delta will continue to monitor MW-8 and assess whether this is an anomaly of the beginning of a trend.

While the ozone injection activities have had an immediate impact on the closest monitoring wells to the injection point, some wells outside the immediate radius of influence have shown a rise in MTBE concentrations. Measurements from the field and laboratory have been inconsistent from the previous quarter, as we would expect to see a significant rise in both DO and ORP due to injection activities. These inconsistent results in TPHg and MTBE concentrations, as well as DO and ORP measurements are typical of sampling events immediately after injection activities. Additionally, MW-1AR, MW-1BR, and MW-7 through MW-11 have been monitored and sampled only for two quarters, producing a very small data set for MTBE concentration comparison. **Therefore, Delta recommends suspension of any remediation activities and that the entire monitoring well network is monitored and sampled during the next quarter (4<sup>th</sup> quarter 2009) with the identical analytical suite as the current quarter.** Analysis of the next quarter's groundwater analytical data is essential in determining how time affects the radius of influence and the impact ozone injection activities have on the wells in which MTBE concentrations rose during the current quarter.

## **LIMITATIONS**

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

\* \* \* \* \*

## **TABLES**

Table 1 – Feasibility Testing Analytical Results (3Q09 M&S Event)

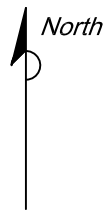
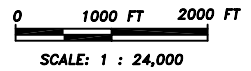
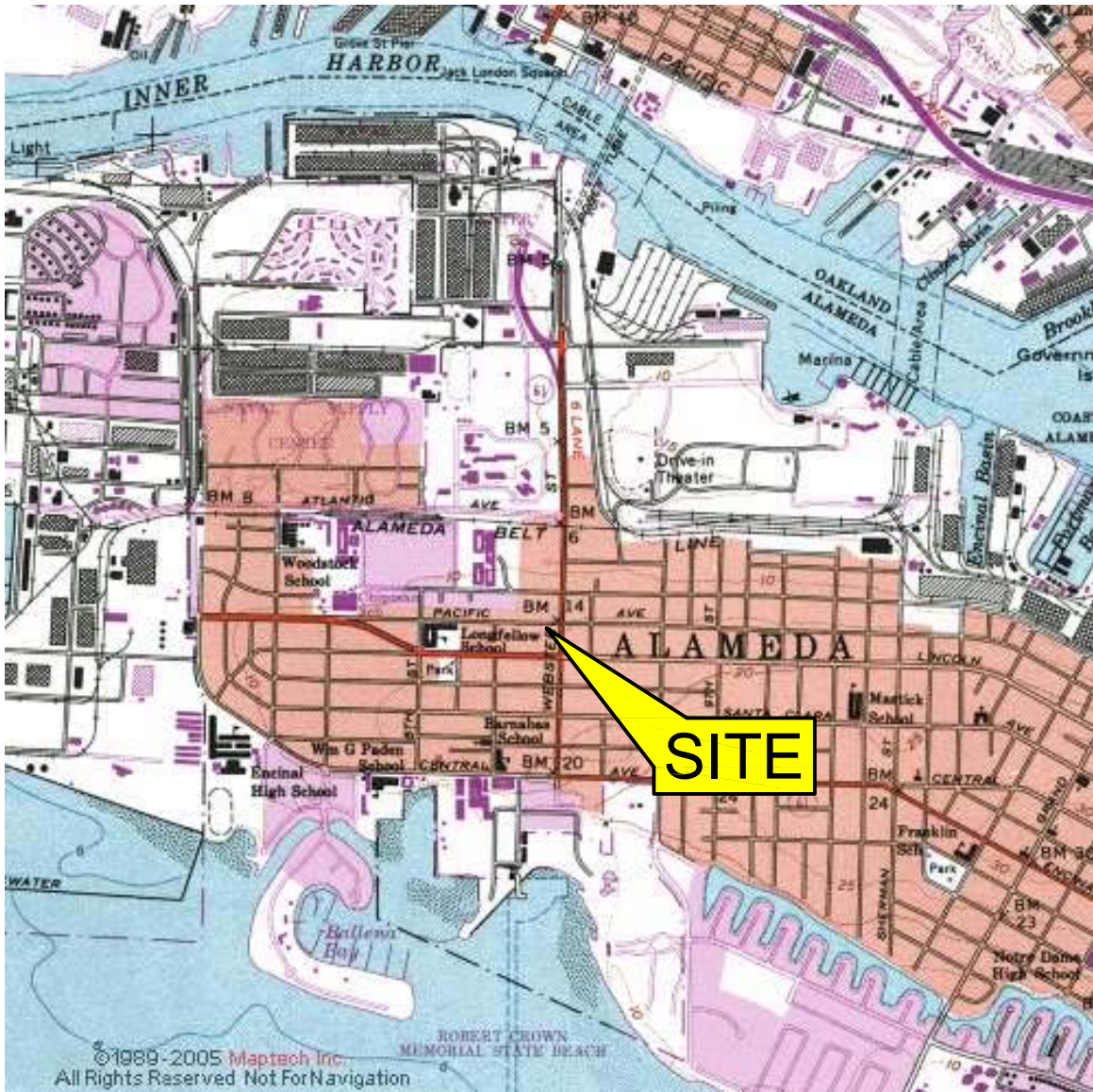
## **FIGURES**

- Figure 1 – Site Location Map
- Figure 2 – Site Plan with Current Sampling Locations
- Figure 3 – Historical Groundwater Flow Direction (Rose) Diagram

## **APPENDICES**

- Appendix A - ACHCSA Letter Dated June 18, 2009
- Appendix B - Integral's Field Data Sheets
- Appendix C - TRC's 3<sup>rd</sup> Quarter 2009 Groundwater Monitoring and Sampling Results, dated September 28, 2009

## Figures



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND WEST QUADRANGLE, 1996

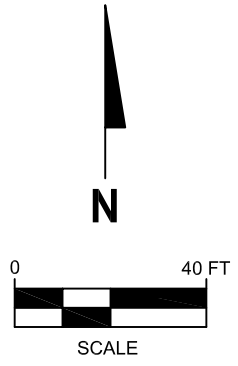
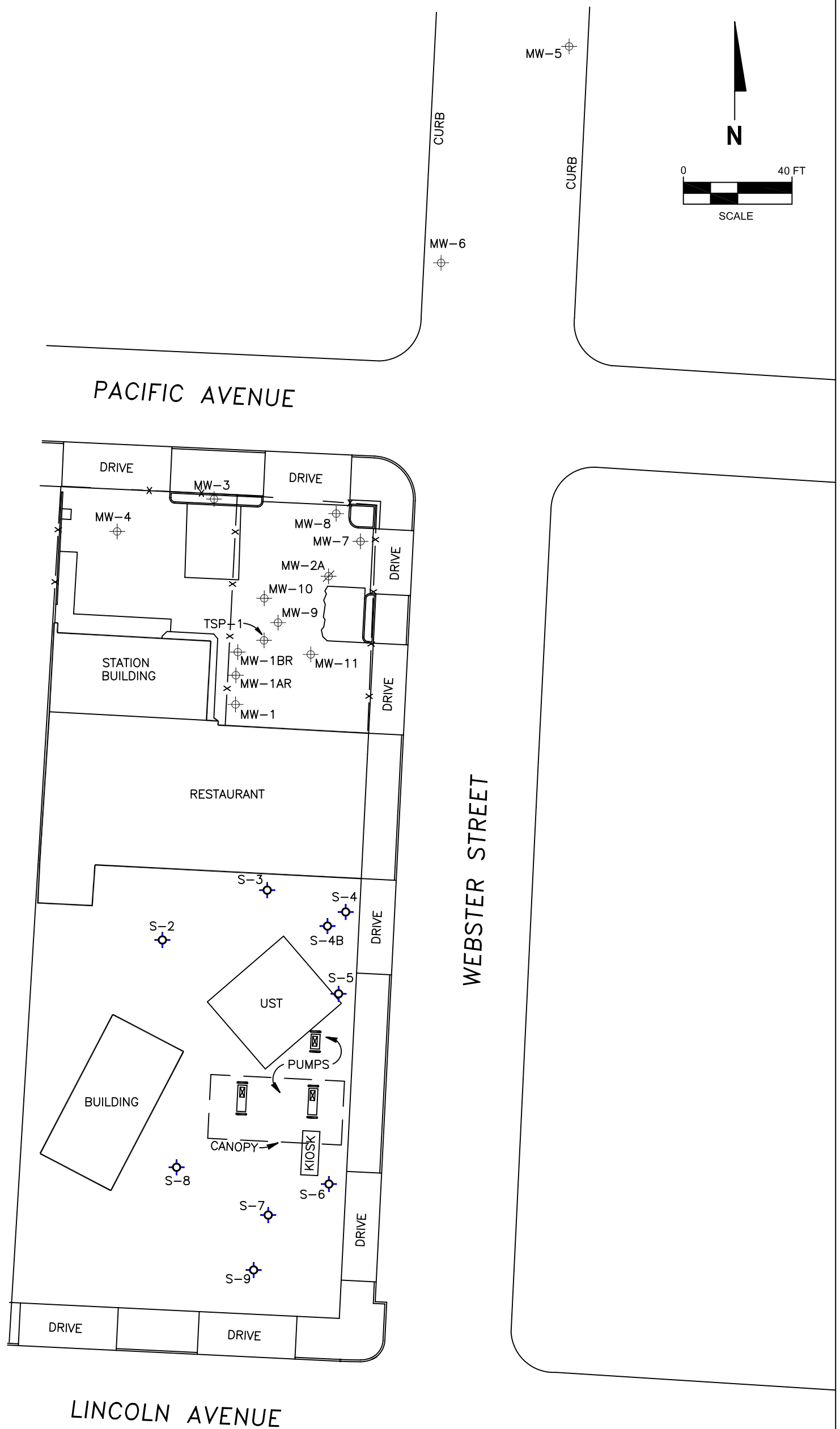
FIGURE 1

SITE LOCATION MAP

76 STATION NO. 0843  
 1629 WEBSTER STREET  
 ALAMEDA, CALIFORNIA

PROJECT NO. C100-843	DRAWN BY JH 03/18/09
FILE NO. Site Locator 0843	PREPARED BY CM
REVISION NO. 2	REVIEWED BY JM





PLAN ADAPTED FROM A SURVEY BY MORROW SURVEYING DATED FEBRUARY 2009.

**LEGEND:**

- MW-1 ACTIVE 76 MONITORING WELL
- MW-2A ABANDONED 76 MONITORING WELL
- S-1 SHELL MONITORING WELL

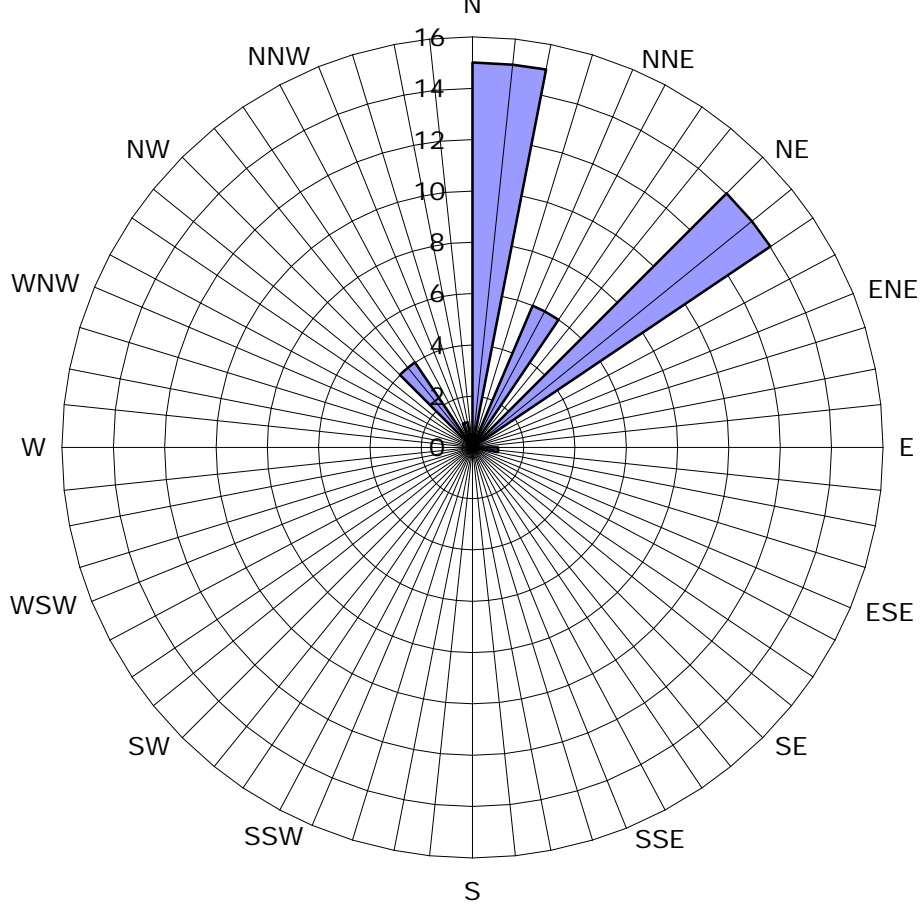
**FIGURE 2  
SITE PLAN**

FORMER 76 STATION NO. 0843  
1629 WEBSTER ROAD  
ALAMEDA, CALIFORNIA

PROJECT NO. C100843	PREPARED BY JBB	DRAWN BY JH
DATE 07/06/09	REVIEWED BY	FILE NAME 76-0843-S



**Historic Groundwater Flow Directions**  
**ConocoPhillips Site No. 0843**  
1629 Webster Street  
Alameda, California



Legend  
Concentric circles represent  
quarterly monitoring events  
First Quarter 1999 through  
Third Quarter 2009  
41 data points shown

■ Groundwater Flow Direction



## Tables

**TABLE 1**  
**FEASIBILITY TESTING ANALYTICAL RESULTS**  
76 Station No. 2349 (0843)  
Alameda, California

Well	Date	Event Description	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Ferrous Iron (µg/L)	Hexavalent Chromium (µg/L)	Total Chromium (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Post- Purge DO (mg/L)	Post- Purge ORP (mV)	Lab DO (mg O/L)	Lab ORP (mV)
MW-1	2/24/2009	1Q09 M&S Event	<b>630**</b>	<0.50	<0.50	<0.50	<1.0	<b>2300</b>	<100	--	--	--	<b>18</b>	<b>4.63</b>	<b>59</b>	--	--
	5/28/2009	2Q09 M&S Event	<b>1000**</b>	<10	<10	<10	<20	<b>4100</b>	<500	<b>2.0</b>	<b>87</b>	<b>9.9</b>	<b>25</b>	<b>0.80</b>	<b>171</b>	<b>8.6</b>	<b>130</b>
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<b>1700**</b>	<5.0	<5.0	<5.0	<10	<b>2100</b>	<100	<b>2.2</b>	<b>220</b>	<b>11</b>	<b>25</b>	<b>1.93</b>	<b>146</b>	<b>6.8</b>	<b>240</b>
MW-1AR	2/24/2009	1Q09 M&S Event	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/28/2009	2Q09 M&S Event	<b>380**</b>	<0.50	<0.50	<0.50	<1.0	<b>930</b>	--	--	--	--	--	<b>1.72</b>	<b>177</b>	--	--
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<b>480**</b>	<1.0	<1.0	<1.0	<2.0	<b>890</b>	<b>2500</b>	<2.0	<b>170</b>	<b>17</b>	<b>39</b>	<b>1.68</b>	<b>187</b>	<b>7.0</b>	<b>205</b>
MW-1BR	2/24/2009	1Q09 M&S Event	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/28/2009	2Q09 M&S Event	<b>290**</b>	<0.50	<0.50	<0.50	<1.0	<b>810</b>	--	--	--	--	--	<b>0.61</b>	<b>165</b>	--	--
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<b>450**</b>	<1.0	<1.0	<1.0	<2.0	<b>680</b>	<500	<2.0	<b>250</b>	<b>17</b>	<b>59</b>	<b>0.46</b>	<b>143</b>	<b>6.7</b>	<b>207</b>
MW-3	2/24/2009	1Q09 M&S Event	<50	<0.50	<0.50	<0.50	<1.0	<b>1.9</b>	<100	--	--	--	<b>130</b>	<b>5.01</b>	<b>49</b>	--	--
	5/28/2009	2Q09 M&S Event	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	--	<b>0.61</b>	<b>85</b>	--	--
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	--	<b>0.49</b>	<b>119</b>	<b>6.6</b>	<b>196</b>
MW-4	2/24/2009	1Q09 M&S Event	<50	<0.50	<0.50	<0.50	<1.0	<b>1.8</b>	<100	--	--	--	<b>130</b>	<b>6.15</b>	<b>64</b>	--	--
	5/28/2009	2Q09 M&S Event	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	--	<b>3.68</b>	<b>55</b>	--	--
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	--	<b>2.16</b>	<b>63</b>	<b>7.1</b>	<b>195</b>
MW-5	2/24/2009	1Q09 M&S Event	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<100	--	--	--	<b>64</b>	<b>5.65</b>	<b>34</b>	--	--
	5/28/2009	2Q09 M&S Event	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	--	<b>1.71</b>	<b>94</b>	--	--
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<50	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	--	--	--	<b>0.64</b>	<b>115</b>	<b>4.0</b>	<b>204</b>
MW-6	2/24/2009	1Q09 M&S Event	<b>250**</b>	<0.50	<0.50	<0.50	<1.0	<b>450</b>	<100	--	--	--	<b>85</b>	<b>3.40</b>	<b>67</b>	--	--
	5/28/2009	2Q09 M&S Event	<b>74**</b>	<0.50	<0.50	<0.50	<1.0	<b>290</b>	--	--	--	--	--	<b>1.06</b>	<b>56</b>	--	--
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<b>230**</b>	<0.50	<0.50	<0.50	<1.0	<b>310</b>	--	--	--	--	--	<b>0.46</b>	<b>118</b>	<b>7.1</b>	<b>205</b>
MW-7	2/24/2009	1Q09 M&S Event	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/28/2009	2Q09 M&S Event	<b>1100**</b>	<0.50	<0.50	<b>1.4</b>	<b>7.1</b>	<b>15000</b>	--	--	--	--	--	<b>1.24</b>	<b>124</b>	--	--
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<b>7900**</b>	<25	<25	<25	<50	<b>15000</b>	<b>3200</b>	<2.0	<b>76</b>	<b>4.2</b>	<b>180</b>	<b>0.26</b>	<b>-53</b>	<b>6.9</b>	<b>217</b>
MW-8	2/24/2009	1Q09 M&S Event	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/28/2009	2Q09 M&S Event	<b>850**</b>	<0.50	<0.50	<0.50	<1.0	<b>12000</b>	<1000	<2.0	<b>140</b>	<b>12</b>	<b>130</b>	<b>2.22</b>	<b>68</b>	<b>9.0</b>	<b>124</b>
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<b>3500**</b>	<25	<25	<25	<50	<b>5600</b>	<b>480</b>	<2.0	<b>60</b>	<b>7.7</b>	<b>260</b>	<b>0.28</b>	<b>92</b>	<b>6.2</b>	<b>407</b>
MW-9	2/24/2009	1Q09 M&S Event	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/28/2009	2Q09 M&S Event	<b>1200**</b>	<0.50	<0.50	<b>0.75</b>	<b>15</b>	<b>13000</b>	--	--	--	--	--	--	--	--	--
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<b>280**</b>	<0.50	<0.50	<0.50	<1.0	<b>390</b>	<1000	<2.0	<b>520</b>	<b>5.0</b>	<b>68</b>	<b>3.58</b>	<b>171</b>	<b>7.3</b>	<b>204</b>
MW-10	2/24/2009	1Q09 M&S Event	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/28/2009	2Q09 M&S Event	<b>700**</b>	<0.50	<0.50	<0.50	<1.0	<b>3500</b>	<b>150</b>	<b>2.0</b>	<10	<b>9.1</b>	<b>30</b>	<b>0.30</b>	<b>156</b>	<b>7.1</b>	<b>139</b>
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<b>3300**</b>	<6.2	<6.2	<6.2	<12	<b>4900</b>	<b>210</b>	<2.0	<b>24</b>	<b>6.3</b>	<b>33</b>	<b>2.19</b>	<b>114</b>	<b>6.1</b>	<b>205</b>
MW-11	2/24/2009	1Q09 M&S Event	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/28/2009	2Q09 M&S Event	<b>920**</b>	<0.50	<0.50	<0.50	<1.0	<b>15000</b>	--	--	--	--	--	<b>0.22</b>	<b>147</b>	--	--
	9/14/2009	3Q09 M&S Event (Post Feasibility Test)	<b>11000**</b>	<25	<25	<25	<50	<b>18000</b>	<b>310</b>	<2.0	<b>14</b>	<b>0.73</b>	<b>37</b>	<b>0.81</b>	<b>49</b>	<b>6.7</b>	<b>192</b>

TPH-G = total petroleum hydrocarbons as gasoline by EPA Method 8260B  
MTBE = methyl tertiary butyl ether by EPA Method 8260B  
M&S = Monitoring and Sampling  
DO = dissolved oxygen  
ORP = oxygen reducing potential

µg/L = micrograms per liter  
mg/L = milligrams per liter  
mV = millivolts  
mg O/L = milligrams of oxygen per liter  
\*\* = indicates TPH-G does not exhibit a "gasoline" pattern, TPH-G is entirely due to MTBE

**Appendix A**

ACHCSA Letter Dated June 18, 2009



RECEIVED

JUN 23 2009

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

June 18, 2009

Terry Grayson  
76 Broadway  
Sacramento, CA 95818

Sam and Michele Koka  
802 Pacific Avenue  
Alameda, CA 94501

Subject: Fuel Leak Case No. RO0000450 and Geotracker Global ID T0600102263, Unocal #0843, 1629 Webster St., Alameda, CA 94501

Dear Mr. Grayson and Mr. and Mrs. Koka:

Alameda County Environmental Health (ACEH) staff has reviewed the document entitled; *Ozone Injection Feasibility Testing WorkPlan* dated June 1, 2009 prepared by Delta Consultants. The work plan proposes a four week ozone sparge feasibility test using a mobile ozone injection unit. The ozone will be injected into the newly installed test sparge well and monitored using the newly installed performance monitoring network.

We generally concur with the proposed scope of work. The proposed work scope may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during field implementation. Submission of a revised work plan is not required. Please provide 72-hour advance written notification to me (e-mail preferred) prior to the start of field activities. Please submit the required reports by the due dates below.

#### TECHNICAL COMMENTS

1. **Water Sample Analysis** – We concur with the proposed analyses. However, please also include wells MW-1BR and MW-1AR in the monitoring for DO and ORP. In accordance with your work plan, include monitoring for MW-7 and MW-8 based on your field observations.

#### TECHNICAL REPORT REQUEST

Please conduct the proposed work and submit technical reports to Alameda County Environmental Health (Attention: Barbara Jakub), according to the following schedule:

- **September 30, 2009** – Interim Remediation Results Report

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

### ELECTRONIC SUBMITTAL OF REPORTS

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

### PERJURY STATEMENT

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

### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

### UNDERGROUND STORAGE TANK CLEANUP FUND

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

Mr. Grayson and Mr. and Mrs. Koka  
RO0000450  
June 18, 2009, Page 3

**AGENCY OVERSIGHT**

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

If you have any questions, please call me at (510) 639-1287 or send me an electronic mail message at [barbara.jakub@acgov.org](mailto:barbara.jakub@acgov.org).

Sincerely,



Barbara J. Jakub, P.G.  
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: James Barnard, Delta Consultants, 11050 White Rock Rd., Suite 110 Rancho Cordova,  
CA 95670  
Donna Drogos, ACEH  
Barbara Jakub, ACEH  
File

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>ISSUE DATE:</b> July 5, 2005
	<b>REVISION DATE:</b> March 27, 2009
	<b>PREVIOUS REVISIONS:</b> December 16, 2005, October 31, 2005
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

#### REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:  
RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

#### Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

#### Submission Instructions

- 1) Obtain User Name and Password:
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org)
    - Or
    - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
  - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for**.
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape and Firefox browsers will not open the FTP site.
  - b) Click on File, then on Login As.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

## **Appendix B**

Integral's Field Data Sheets



**Pilot Test Field Measurement Record**

ConocoPhillips SRe No. 0843  
1628 Webster Street  
Alameda, California

Measurement Record for Well: MW-7

Date: Week of Aug 10<sup>th</sup>  
Recorded By: James Dutra

Date	Time	Injection Well	Depth To Water (feet bgs)	Temp (oF)	Dissolved Oxygen PPM	Oxygen Reducing Potential (mV)	pH	Electrode Conductivity (uS/cm)	Operating Flow/Pressure CFM/PSI	Ozone Concentration mg/day	Comments
8/10/09	8:38	-	6.20		0.28	-258.7					pre-injection
8/10/09	1520	-	5.78		0.37	-214.7					during injection
8/10/09	1712	-	6.31		0.55	-202.6					post injection
8/11/09	0810	-	6.22		0.25	-249.3					pre-injection
8/11/09	1230	-	6.09		0.42	-204.1					during injection
8/11/09	1634	-	6.29		0.45	-197.2					post injection
8/12/09	1109	-	6.19		0.26	-254.5					pre-injection
8/12/09	1535	-	6.24		0.42	-229.6					during injection
8/12/09	1934	-	6.58		0.71	-194.1					post injection
8/12/09	0952	-	6.25		0.22	-201.3					pre-injection
8/13/09	1423	-	5.91		0.36	-166.9					during injection
8/13/09	1923	-	6.46		0.51	-183.7					post injection
8/14/09	0814	-	6.26		0.52	-187.3					pre-injection
8/14/09	1237	-	6.15		0.35	-165.9					during injection
8/14/09	1635	-	6.26		0.44	-233.5					post injection









Pilot Test Field Measurement Record

Coneco/Phillips Site No. 0843  
 1828 Webster Street  
 Alameda, California

Measurement Record for Well: MW-TAR

Date: WEEK OF AUG. 17<sup>th</sup>  
 Recorded By: JAMES DUTRA

Date	Time	Injection Well	Depth To Water (feet bgs)	Temp (°F)	Dissolved Oxygen PPM	Oxygen Reducing Potential (mV)	pH	Electrical Conductivity (µS/cm)	Operating Flow/Pressure CFM/PSI	Ozone Concentration lb/day	Comments
17 Aug. 09	0755	-	7.53		0.37	-54.4					pre-injection
17 Aug. 09	1215	-	6.99		2.68	114.2					during injection
17 Aug. 09	1620	-	7.39		1.66	11.7					post injection
18 Aug. 09	0615	-	7.56		1.18	-42.7					pre-injection
18 Aug. 09	1045	-	7.31		1.49	187.5					during injection
18 Aug. 09	1445	-	7.49		1.73	-105.5					post injection
19 Aug. 09	0715	-	7.56		0.58	-0.3					pre-injection
19 Aug. 09	1200	-	7.20		0.67	168.4					during injection
19 Aug. 09	1530	-	7.49		0.32	157.9					post injection
20 Aug. 09	0720	-	7.58		0.33	54.8					pre-injection
20 Aug. 09	1150	-	7.23		0.61	188.1					during injection
20 Aug. 09	1545	-	7.52		0.55	178.3					post injection
21 Aug. 09	0745	-	7.57		0.38	78.6					pre-injection
21 Aug. 09	1200	-	7.13		0.59	113.5					during injection
21 Aug. 09	1600	-	7.54		0.32	175.4					post injection









Pilot Test Field Measurement Record

ConocoPhillips Site No. 0943  
 1629 Webster Street  
 Alameda, California

Measurement Record for Well: MW-10R

Date: Week of Aug 17th  
 Recorded By: James Dutra

Date	Time	Injection Well	Depth To Water (feet bgs)	Temp (°F)	Dissolved Oxygen PPM	Oxygen Reducing Potential (mV)	pH	Electrical Conductivity (µS/cm)	Operating Flow/Pressure CFM/PSI	Ozone Concentration lb/day	Comments
17 Aug 09	0757	-	7.50		0.38	33.2					pre-injection
17 Aug 09	1217	-	7.29		2.16	127.4					during injection
17 Aug 09	1622	-	7.46		1.30	51.9					post injection
18 Aug 09	0617	-	7.57		0.46	24.5					pre-injection
18 Aug 09	1047	-	7.46		0.92	106.9					during injection
18 Aug 09	1447	-	7.51		1.12	-86.4					post injection
19 Aug 09	0717	-	7.53		0.53	107.1					pre-injection
19 Aug 09	1202	-	7.39		0.28	167.8					during injection
19 Aug 09	1532	-	7.51		0.40	136.8					post injection
20 Aug 09	0722	-	7.54		0.30	109.3					pre-injection
20 Aug 09	1153	-	7.43		0.57	194.8					during injection
20 Aug 09	1547	-	7.55		0.51	163.7					post injection
21 Aug 09	0747	-	7.46		0.34	89.1					pre-injection
21 Aug 09	1202	-	7.37		0.51	167.4					during injection
21 Aug 09	1602	-	7.66		0.38	131.9					post injection





Pilot Test Field Measurement Record											
ConocoPhillips Site No. 0643											
1829 Webster Street											
Alameda, California											
Measurement Record for Well: <u>MW-8</u>											
Date: <u>WEEK of Aug 10<sup>th</sup></u>											
Recorded By: <u>James Dutra</u>											
Date	Time	Injection Well	Depth To Water (feet bgs)	Temp (°F)	Dissolved Oxygen PPM	Oxygen Reducing Potential (mV)	pH	Electrical Conductivity (µS/cm)	Operating Flow/Pressure CFM/PSI	Ozone Concentration lb/day	Comments
8/10/09	8:38	---	6.40		0.30	-75.2					pre-injection
8/10/09	1322	---	6.32		0.47	-80.4					during injection
8/10/09	1715	---	6.69		1.03	-74.2					post injection
8/11/09	0813	---	6.37		0.33	-80.6					pre-injection
8/11/09	1233	---	6.49		0.71	-106.1					during injection
8/11/09	1637	---	6.66		0.55	-133.7					post injection
8/12/09	1110	---	6.41		0.32	-76.3					pre-injection
8/12/09	1537	---	6.20		0.55	-81.4					during injection
8/12/09	1939	---	7.03		1.27	-102.2					post injection
8/13/09	0954	---	6.63		0.25	-41.8					pre-injection
8/13/09	1425	---	6.05		0.41	-61.2					during injection
8/13/09	1825	---	6.95		1.14	-57.9					post injection
8/14/09	0816	---	6.64		0.42	-62.8					pre-injection
8/14/09	1240	---	6.54		0.41	-58.1					during injection
8/14/09	1637	---	6.65		0.49	-158.6					post injection









Pilot Test Field Measurement Record

ConocoPhillips Site No. 0843  
1828 Webster Street  
Alameda, California

Measurement Record for Well: MW-9

Date: Week of Aug 10<sup>th</sup>  
Recorded By: James Dutra

Date	Time	Injection Well	Depth To Water (feet bgs)	Temp (°F)	Dissolved Oxygen PPM	Oxygen Reducing Potential (mV)	pH	Electrical Conductivity (µS/cm)	Operating Flow/Pressure CFM/PSI	Ozone Concentration lb/day	Comments
8/10/09	8:39	---	6.89		0.30	-415					pre-injection
8/10/09	1324	Well	bubbling over - unstable reading								during injection
8/10/09	1719	---	7.99		10.37	-38.6					post injection
8/11/09	0915	---	7.01		0.27	-38.9					pre-injection
8/11/09	1255	Well	bubbling - unstable reading								during injection
8/11/09	1640	---	8.86		11.67	-53.4					post injection
8/12/09	1113	---	7.07		0.29	-40.3					pre-injection
8/12/09	1540	---	Well bubbling - unstable reading								during injection
8/12/09	1941	---	8.58		11.23	-46.1					post injection
8/13/09	0956	---	7.05		0.27	-26.0					pre-injection
8/13/09	1429	---	Well bubbling - unstable reading								during injection
8/13/09	1927	---	7.64		12.52	-42.8					post injection
8/14/09	0819	---	7.07		7.09	-26.7					pre-injection
8/14/09	1242	---	Well bubbling - unstable reading								during injection
8/14/09	1640	---	6.49		13.31	-31.3					post injection

Pilot Test Field Measurement Record

ConocoPhillips Site No. 0843  
1829 Webster Street  
Alameda, California

Measurement Record for Well: MW-9

Date: Week of Aug 17<sup>th</sup>

Recorded By: James Dutra

Date	Time	Injection Well	Depth To Water (feet bgs)	Temp (°F)	Dissolved Oxygen PPM	Oxygen Reducing Potential (mV)	pH	Electrical Conductivity (µS/cm)	Operating Flow/Pressure CFM/PSI	Ozone Concentration lb/day	Comments
17 Aug 09	0805	-	7.07		4.75	-56.8					pre-injection
17 Aug 09	1225	-	Well bubbling -		unstable reading						during injection
17 Aug 09	1630	-	7.04		12.25	13.6					post injection
18 Aug 09	0625	-	7.10		5.02	-66.2					pre-injection
18 Aug 09	1055	-	Well bubbling -		unstable reading						during injection
18 Aug 09	1455	-	7.17		11.47	-28.1					post injection
19 Aug 09	0729	-	7.10		8.89	20.5					pre-injection
19 Aug 09	1208	-	Well bubbling -		unstable reading						during injection
19 Aug 09	1540	-	7.15		15.86	96.9					post injection
20 Aug 09	0729	-	7.11		8.29	51.6					pre-injection
20 Aug 09	1200	-	Well bubbling -		unstable reading						during injection
20 Aug 09	1555	-	7.25		14.89	111.6					post injection
21 Aug 09	0755	-	7.10		7.26	42.7					pre-injection
21 Aug 09	1210	-	Well bubbling -		unstable reading						during injection
21 Aug 09	1610	-	7.62		14.46	113.7					post injection



Pilot Test Field Measurement Record

ConocoPhillips Site No. 0843  
1828 Webster Street  
Alameda, California

Measurement Record for Well: MW-9

Date: WEEK OF August 31<sup>st</sup>  
Recorded By: JAMES OUTRA

Date	Time	Injection Well	Depth To Water (feet bgs)	Temp (°F)	Dissolved Oxygen (PPM)	Oxygen Reducing Potential (mV)	pH	Electrical Conductivity (uS/cm)	Operating Flow/Pressure CFM/PSI	Ozone Concentration lb/day	Comments
31 Aug. 09	0639	-	7.02		0.54	-60.9					pre-injection
31 Aug. 09	1109	-	Well bubbling - unstable reading								during injection
31 Aug. 09	1510	-	8.75		8.97	-24.5					post-injection
01 Sept. 09	0754	-	7.19		3.30	18.2					pre-injection
01 Sept. 09	1410	-	Well bubbling - unstable reading								during injection
01 Sept. 09	1810	-	8.06		11.85	137.6					post-injection
02 Sept. 09	0740	-	7.24		4.06	82.3					pre-injection
02 Sept. 09	1219	-	Well bubbling - unstable reading								during injection
02 Sept. 09	1555	-	8.52		9.75	-58.7					post-injection
03 Sept. 09	0925	-	7.50		4.86	68.4					pre-injection
03 Sept. 09	1340	-	Well bubbling - unstable reading								during injection
03 Sept. 09	1739	-	8.31		10.66	101.9					post-injection
04 Sept. 09	0825	-	7.25		4.29	23.2					pre-injection
04 Sept. 09	1253	-	Well bubbling - unstable reading								during injection
04 Sept. 09	1640	-	8.74		9.29	71.4					post-injection

Pilot Test Field Measurement Record

ConocoPhillips Site No. 0043  
 1020 Webster Street  
 Alameda, California

Measurement Record for Well: MW-10

Date: Week of Aug. 10<sup>th</sup>  
 Recorded By: JAMES DUTRA

Date	Time	Injection Well	Depth To Water (feet bgs)	Temp (°F)	Dissolved Oxygen PPM	Oxygen Reducing Potential (mV)	pH	Electrical Conductivity (uS/cm)	Operating Flow/Pressure CFM/PSI	Ozone Concentration blows	Comments
8/10/09	8:40	---	7.03		0.27	-13.5					pre-injection
8/10/09	1325	---	6.42		0.53	6.8					during injection
8/10/09	1720	---	8.90		0.73	2.0					post injection
8/11/09	0917	---	7.00		0.26	-12.4					pre-injection
8/11/09	1236	---	6.84		0.39	-5.3					during injection
8/11/09	1641	---	8.89		0.64	18.9					post injection
8/12/09	1115	---	7.09		0.28	-13.1					pre-injection
8/12/09	1543	---	6.88		0.61	4.3					during injection
8/12/09	1945	---	9.01		0.99	-1.6					post injection
8/13/09	0958	---	7.18		0.29	-11.7					pre-injection
8/13/09	1431	---	6.78		0.72	18.1					during injection
8/13/09	1830	---	8.87		0.84	9.7					post injection
8/14/09	0820	---	7.17		0.30	1.1					pre-injection
8/14/09	1245	---	7.01		0.45	7.6					during injection
8/14/09	1642	---	8.47		0.67	-15.9					post-injection









Pilot Test Field Measurement Record

Corbin/Phillips Site No. 0543  
1428 Webster Street  
Alameda, California

Measurement Record for Well: MW-11

Date: WEEK OF AUG. 10<sup>TH</sup>  
Recorded By: JAMES DUTRA

Date	Time	Injection Well	Depth To Water (feet bgs)	Temp (°F)	Dissolved Oxygen PPM	Oxygen Redoxing Potential (mV)	pH	Electrical Conductivity (µS/cm)	Operating Flow/Pressure CFM/PSI	Ozone Concentration lb/day	Comments
8/10/09	8:40	-	6.50		0.25	82.9					pre-injection
8/10/09	1327	-	6.30		0.50	-49.2					during injection
8/10/09	1729	-	5.41		0.81	-84.6					post injection
8/11/09	0819	-	6.94		0.27	81.5					pre-injection
8/11/09	1238	-	6.61		0.46	-62.7					during injection
8/11/09	1645	-	8.38		0.45	-25.1					post injection
8/12/09	1116	-	6.87		0.31	84.8					pre-injection
8/12/09	1545	-	6.44		0.55	-52.6					during injection
8/12/09	1947	-	5.60		0.73	-79.5					post injection
8/12/09	1800	-	6.95		0.24	76.9					pre-injection
8/13/09	1433	-	6.11		0.57	-36.4					during injection
8/13/09	1832	-	5.99		0.78	-68.3					post injection
8/14/09	0822	-	6.93		0.26	6.1					pre-injection
8/14/09	1248	-	6.74		0.37	-1.4					during injection
8/14/09	1644	-	8.10		0.52	-21.7					post injection

















## **Appendix C**

TRC's 3<sup>rd</sup> Quarter 2009 Groundwater Monitoring and  
Sampling Results, dated September 28, 2009



21 Technology Drive  
Irvine, CA 92618

949.727.9336 PHONE  
949.727.7399 FAX

www.TRCSolutions.com

DATE: September 28, 2009

TO: ConocoPhillips Company  
76 Broadway  
Sacramento, CA 95818

ATTN: MR. TERRY GRAYSON

SITE: FORMER 76 STATION 0843  
1629 WEBSTER STREET  
ALAMEDA, CALIFORNIA

RE: QUARTERLY MONITORING REPORT  
JULY THROUGH SEPTEMBER 2009

Dear Mr. Grayson:

Please find enclosed our Quarterly Monitoring Report for Former 76 Station 0843, located at 1629 Webster Street, Alameda, California. If you have any questions regarding this report, please call us at (949) 727-9336.

Sincerely,

TRC

A handwritten signature in black ink, appearing to read "Anju Farfan".

Anju Farfan  
Groundwater Program Operations Manager

CC: Mr. James Barnard, Delta Consultants (2 copies)

Enclosures  
20-0400/0843R25 QMS

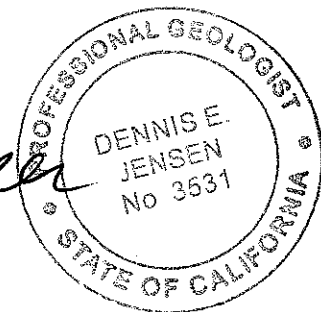
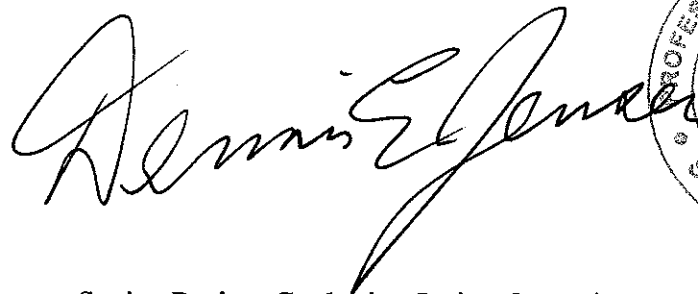
**QUARTERLY MONITORING REPORT  
JULY THROUGH SEPTEMBER 2009**

FORMER 76 STATION 0843  
1629 Webster Street  
Alameda, California

Prepared For:

Mr. Terry Grayson  
CONOCOPHILLIPS COMPANY  
76 Broadway  
Sacramento, California 95818

By:



Senior Project Geologist, Irvine Operations

Date: 9/20/09



## LIST OF ATTACHMENTS

Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key Contents of Tables Table 1: Current Fluid Levels and Selected Analytical Results Table 1a: Additional Current Analytical Results Table 1b: Additional Current Analytical Results Table 2: Historic Fluid Levels and Selected Analytical Results Table 2a: Additional Historic Analytical Results Table 2b: Additional Historic Analytical Results
Coordinated Event Data	<i>Shell Service Station</i> (Not Provided this Quarter)
Figures	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase TPH-G (GC/MS) Concentration Map Figure 4: Dissolved-Phase Benzene Concentration Map Figure 5: Dissolved-Phase MTBE Concentration Map Figure 6: Dissolved-Phase TBA Concentration Map
Graphs	Groundwater Elevations vs. Time Benzene Concentrations vs. Time
Field Activities	General Field Procedures Field Monitoring Data Sheets – 09/14/09 Groundwater Sampling Field Notes – 09/14/09
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Disposal Documents	Disposal/Treatment Manifests – Current (Pending)
Statements	Limitations

**Summary of Gauging and Sampling Activities**  
**July 2009 through September 2009**  
**Former 76 Station 0843**  
**1629 Webster Street**  
**Alameda, CA**

---

Project Coordinator: **Terry Grayson**  
Telephone: **916-558-7666**

Water Sampling Contractor: **TRC**  
Compiled by: **Christina Carrillo**

Date(s) of Gauging/Sampling Event: **09/14/09**

**Sample Points**

---

Groundwater wells: **10** onsite, **2** offsite Points gauged: **12** Points sampled: **12**

Purging method: **Submersible pump**

Purge water disposal: **Crosby and Overton treatment facility**

Other Sample Points: **0** Type: **--**

**Liquid Phase Hydrocarbons (LPH)**

---

Sample Points with LPH: **0** Maximum thickness (feet): **--**

LPH removal frequency: **--** Method: **--**

Treatment or disposal of water/LPH: **--**

**Hydrogeologic Parameters**

---

Depth to groundwater (below TOC): Minimum: **6.29 feet** Maximum: **7.83 feet**

Average groundwater elevation (relative to available local datum): **11.16 feet**

Average change in groundwater elevation since previous event: **-0.71 feet**

Interpreted groundwater gradient and flow direction:

Current event: **0.005 ft/ft, northeast**

Previous event: **0.02 ft/ft, east (05/28/09)**

**Selected Laboratory Results**

---

Sample Points with detected **Benzene**: **0** Sample Points above MCL (1.0 µg/l): **--**  
Maximum reported benzene concentration: **--**

Sample Points with **TPH-G by GC/MS** **9** Maximum: **11,000 µg/l (MW-11)**

Sample Points with **MTBE 8260B** **9** Maximum: **18,000 µg/l (MW-11)**

**Notes:**

---

# TABLES

## TABLE KEY

### STANDARD ABBREVIATIONS

--	=	not analyzed, measured, or collected
LPH	=	liquid-phase hydrocarbons
Trace	=	less than 0.01 foot of LPH in well
µg/l	=	micrograms per liter (approx. equivalent to parts per billion, ppb)
mg/l	=	milligrams per liter (approx. equivalent to parts per million, ppm)
ND<	=	not detected at or above laboratory detection limit
TOC	=	top of casing (surveyed reference elevation)
D	=	duplicate
P	=	no-purge sample

### ANALYTES

BTEX	=	benzene, toluene, ethylbenzene, and (total) xylenes
DIPE	=	di-isopropyl ether
ETBE	=	ethyl tertiary butyl ether
MTBE	=	methyl tertiary butyl ether
PCB	=	polychlorinated biphenyls
PCE	=	tetrachloroethene
TBA	=	tertiary butyl alcohol
TCA	=	trichloroethane
TCE	=	trichloroethene
TPH-G	=	total petroleum hydrocarbons with gasoline distinction
TPH-G (GC/MS)	=	total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B
TPH-D	=	total petroleum hydrocarbons with diesel distinction
TRPH	=	total recoverable petroleum hydrocarbons
TAME	=	tertiary amyl methyl ether
1,1-DCA	=	1,1-dichloroethane
1,2-DCA	=	1,2-dichloroethane (same as EDC, ethylene dichloride)
1,1-DCE	=	1,1-dichloroethene
1,2-DCE	=	1,2-dichloroethene (cis- and trans-)

### NOTES

1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
2. Groundwater elevations for wells with LPH are calculated as:  $\text{Surface Elevation} - \text{Measured Depth to Water} + (\text{Dp} \times \text{LPH Thickness})$ , where Dp is the density of the LPH, if known. A value of 0.75 is used for gasoline and when the density is not known. A value of 0.83 is used for diesel.
3. Wells with LPH are generally not sampled for laboratory analysis (see General Field Procedures).
4. Comments shown on tables are general. Additional explanations may be included in field notes and laboratory reports, both of which are included as part of this report.
5. A "J" flag indicates that a reported analytical result is an estimated concentration value between the method detection limit (MDL) and the practical quantification limit (PQL) specified by the laboratory.
6. Other laboratory flags (qualifiers) may have been reported. See the official laboratory report (attached) for a complete list of laboratory flags.
7. Concentration graphs based on tables (presented following Figures) show non-detect results prior to the Second Quarter 2000 plotted at fixed values for graphical display. Non-detect results reported since that time are plotted at reporting limits stated in the official laboratory report.

### REFERENCE

TRC began groundwater monitoring and sampling for Former 76 Station 0843 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

# Contents of Tables 1 and 2

## Site: Former 76 Station 0843

### Current Event

Table 1	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)
Table 1a	Well/ Date	TBA	Ethanol (8260B)	DIPE	ETBE	TAME	Carbon (organic, total)	Chromium VI	Chromium (total)	Iron Ferrous	Manganese (dissolved)	Manganese (total)	Nitrogen as Nitrate
Table 1b	Well/ Date	Sulfate	Dissolved Oxygen (Lab)	Redox Potential (ORP-Lab)	Specific Con- ductance	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	Pre-purge ORP	Post-purge ORP				

### Historic Data

Table 2	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)
Table 2a	Well/ Date	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Carbon (organic, total)	Chromium VI	Chromium (total)	Iron Ferrous	Manganese (dissolved)
Table 2b	Well/ Date	Manganese (total)	Nitrogen as Nitrate	Sulfate	Dissolved Oxygen (Lab)	Redox Potential (ORP-Lab)	Specific Con- ductance	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	Pre-purge ORP	Post-purge ORP		



**Table 1**  
**CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**September 14, 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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>								
09/14/09	19.13	7.60	0.00	11.53	-1.14	--	1700	ND<5.0	ND<5.0	ND<5.0	ND<10	--	2100	
<b>MW-1AR</b>						<b>(Screen Interval in feet: 25-30)</b>								
09/14/09	19.29	7.83	0.00	11.46	-0.58	--	480	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	890	
<b>MW-1BR</b>						<b>(Screen Interval in feet: 30-35)</b>								
09/14/09	19.13	7.80	0.00	11.33	-1.10	--	450	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	680	
<b>MW-3</b>						<b>(Screen Interval in feet: 5.0-20.0)</b>								
09/14/09	18.05	6.88	0.00	11.17	-1.24	--	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>								
09/14/09	18.14	6.76	0.00	11.38	-1.06	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-5</b>						<b>(Screen Interval in feet: 5-20)</b>								
09/14/09	16.45	6.29	0.00	10.16	-1.17	--	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>								
09/14/09	16.97	6.30	0.00	10.67	-1.04	--	230	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	310	
<b>MW-7</b>						<b>(Screen Interval in feet: 25-30)</b>								
09/14/09	17.81	6.77	0.00	11.04	1.52	--	7900	ND<25	ND<25	ND<25	ND<50	--	15000	
<b>MW-8</b>						<b>(Screen Interval in feet: 25-30)</b>								
09/14/09	18.13	6.97	0.00	11.16	0.45	--	3500	ND<25	ND<25	ND<25	ND<50	--	5600	
<b>MW-9</b>						<b>(Screen Interval in feet: 20-25)</b>								
09/14/09	18.75	7.36	0.00	11.39	-1.12	--	280	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	390	
<b>MW-10</b>						<b>(Screen Interval in feet: 25-30)</b>								
09/14/09	18.84	7.50	0.00	11.34	-0.81	--	3300	ND<6.2	ND<6.2	ND<6.2	ND<12	--	4900	
<b>MW-11</b>						<b>(Screen Interval in feet: 25-30)</b>								
09/14/09	18.72	7.45	0.00	11.27	-1.27	--	11000	ND<25	ND<25	ND<25	ND<50	--	18000	

**Table 1 a**  
**ADDITIONAL CURRENT ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled						Carbon	Chromium	Chromium	Iron	Manganese	Manganese	Nitrogen
	TBA	Ethanol	DIPE	ETBE	TAME	(organic, total)	VI	(total)	Ferrous	(dissolved)	(total)	as Nitrate
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)
<b>MW-1</b>												
09/14/09	ND<100	ND<2500	ND<5.0	ND<5.0	ND<5.0	1.4	2.2	220	ND<100	3.7	1600	11
<b>MW-1AR</b>												
09/14/09	110	ND<500	ND<1.0	ND<1.0	ND<1.0	4.5	ND<2.0	170	2500	570	830	17
<b>MW-1BR</b>												
09/14/09	33	ND<500	ND<1.0	ND<1.0	1.9	3.7	ND<2.0	250	ND<500	230	930	17
<b>MW-3</b>												
09/14/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--
<b>MW-4</b>												
09/14/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--
<b>MW-5</b>												
09/14/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--
<b>MW-6</b>												
09/14/09	23	ND<250	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--
<b>MW-7</b>												
09/14/09	680	ND<12000	ND<25	ND<25	ND<25	9.8	ND<2.0	76	3200	2000	2200	4.2
<b>MW-8</b>												
09/14/09	ND<500	ND<12000	ND<25	ND<25	ND<25	14	ND<2.0	60	480	1000	1300	7.7
<b>MW-9</b>												
09/14/09	24	ND<250	ND<0.50	ND<0.50	ND<0.50	3.0	ND<2.0	520	ND<1000	180	4700	5.0
<b>MW-10</b>												
09/14/09	240	ND<3100	ND<6.2	ND<6.2	ND<6.2	2.7	ND<2.0	24	210	280	380	6.3
<b>MW-11</b>												
09/14/09	850	ND<12000	ND<25	ND<25	ND<25	3.3	ND<2.0	14	310	570	740	0.73

**Table 1 b**  
**ADDITIONAL CURRENT ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	Sulfate (mg/l)	Dissolved Oxygen (Lab) (mg O/)	Redox Potential (ORP-Lab) (mV)	Specific Conductance (µmhos)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)	Post-purge ORP (mV)
<b>MW-1</b>								
09/14/09	25	6.8	204	429	1.93	3.81	233	146
<b>MW-1AR</b>								
09/14/09	39	7.0	205	655	1.68	1.83	235	187
<b>MW-1BR</b>								
09/14/09	59	6.7	207	673	0.46	1.02	228	143
<b>MW-3</b>								
09/14/09	--	6.6	196	658	0.49	2.02	146	119
<b>MW-4</b>								
09/14/09	--	7.1	195	1020	2.16	2.78	142	63
<b>MW-5</b>								
09/14/09	--	4.0	204	609	0.64	2.08	147	115
<b>MW-6</b>								
09/14/09	--	7.1	205	595	0.46	1.07	154	118
<b>MW-7</b>								
09/14/09	180	6.9	217	1030	0.26	1.35	-13	-53
<b>MW-8</b>								
09/14/09	260	6.2	407	1100	0.28	1.11	151	92
<b>MW-9</b>								
09/14/09	68	7.3	204	580	3.58	4.16	236	171
<b>MW-10</b>								
09/14/09	33	6.1	205	675	2.19	0.67	235	114
<b>MW-11</b>								
09/14/09	37	6.7	192	780	0.81	0.82	224	49

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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 (Screen Interval in feet: 4.5-20.5)</b>														
03/05/99	16.18	--	--	--	--	86.6	--	ND	2.04	ND	4.06	--	23.9	
06/03/99	16.18	6.24	0.00	9.94	--	ND	--	ND	ND	ND	ND	ND	ND	
09/02/99	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	--	
03/14/00	16.18	5.47	0.00	10.71	2.60	ND	--	ND	ND	ND	ND	ND	--	
05/31/00	16.18	6.22	0.00	9.96	-0.75	ND	--	ND	ND	ND	ND	ND	--	
08/29/00	16.18	6.82	0.00	9.36	-0.60	ND	--	ND	ND	ND	ND	ND	--	
12/01/00	16.18	7.54	0.00	8.64	-0.72	ND	--	ND	ND	ND	ND	ND	--	
03/17/01	16.18	5.73	0.00	10.45	1.81	ND	--	ND	ND	ND	ND	ND	--	
05/23/01	16.18	6.43	0.00	9.75	-0.70	ND	--	ND	ND	ND	ND	ND	--	
09/24/01	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	--	
03/11/02	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	--	
06/07/02	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	--	
09/03/02	16.18	--	--	--	--	--	--	--	--	--	--	--	--	Not monitored/sampled
12/12/02	16.18	7.80	0.00	8.38	--	--	--	--	--	--	--	--	--	No longer sampled
03/13/03	16.18	5.94	0.00	10.24	1.86	--	--	--	--	--	--	--	--	
06/12/03	16.18	6.10	0.00	10.08	-0.16	--	--	--	--	--	--	--	--	
09/12/03	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
02/12/04	16.18	6.02	0.00	10.16	-0.28	--	--	--	--	--	--	--	--	Monitored Only
06/07/04	16.18	6.61	0.00	9.57	-0.59	--	--	--	--	--	--	--	--	Monitored Only

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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>														
09/17/04	16.18	7.58	0.00	8.60	-0.97	--	--	--	--	--	--	--	--	Sampled Q1 only
12/11/04	16.18	6.49	0.00	9.69	1.09	--	--	--	--	--	--	--	--	Sampled Q1 only
03/15/05	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	
05/17/05	16.18	5.83	0.00	10.35	-0.55	--	--	--	--	--	--	--	--	Sampled Q1 only
07/27/05	16.18	6.52	0.00	9.66	-0.69	--	--	--	--	--	--	--	--	Sampled Q1 only
11/23/05	16.18	7.28	0.00	8.90	-0.76	--	--	--	--	--	--	--	--	Sampled Q1 only
02/24/06	16.18	6.60	0.00	9.58	0.68	--	910	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5100	
05/30/06	16.18	6.48	0.00	9.70	0.12	--	--	--	--	--	--	--	--	Sampled Q1 only
08/30/06	16.18	9.51	0.00	6.67	-3.03	--	--	--	--	--	--	--	--	Sampled Q1 only
11/22/06	16.18	7.05	0.00	9.13	2.46	--	220	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	420	
02/23/07	16.18	6.40	0.00	9.78	0.65	--	1300	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	1700	
05/18/07	16.18	6.65	0.00	9.53	-0.25	--	2300	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	3300	
08/10/07	16.18	7.26	0.00	8.92	-0.61	--	4100	ND<25	ND<25	ND<25	ND<25	--	4300	
11/09/07	16.18	7.40	0.00	8.78	-0.14	--	5700	ND<25	ND<25	ND<25	ND<25	--	5400	
02/08/08	16.18	6.09	0.00	10.09	1.31	--	2600	ND<5.0	ND<5.0	ND<5.0	ND<10	--	4100	
05/16/08	16.18	6.87	0.00	9.31	-0.78	--	1800	ND<12	ND<12	ND<12	42	--	3500	
08/15/08	16.18	7.78	0.00	8.40	-0.91	--	1200	ND<5.0	ND<5.0	ND<5.0	ND<10	--	1900	
11/26/08	16.18	8.65	0.00	7.53	-0.87	--	720	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2400	
02/24/09	19.13	6.73	0.00	12.40	4.87	--	630	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2300	
05/28/09	19.13	6.46	0.00	12.67	0.27	--	1000	ND<10	ND<10	ND<10	ND<20	--	4100	
09/14/09	19.13	7.60	0.00	11.53	-1.14	--	1700	ND<5.0	ND<5.0	ND<5.0	ND<10	--	2100	
<b>MW-1AR (Screen Interval in feet: 25-30)</b>														
05/28/09	19.29	7.25	0.00	12.04	--	--	380	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	930	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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-1AR continued</b>														
09/14/09	19.29	7.83	0.00	11.46	-0.58	--	480	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	890	
<b>MW-1BR (Screen Interval in feet: 30-35)</b>														
05/28/09	19.13	6.70	0.00	12.43	--	--	290	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	810	
09/14/09	19.13	7.80	0.00	11.33	-1.10	--	450	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	680	
<b>MW-2 (Screen Interval in feet: 4.5-20.5)</b>														
03/05/99	15.57	--	0.00	--	--	34400	--	2070	7710	2340	8240	--	8460	
06/03/99	15.57	5.96	0.00	9.61	--	51200	--	1820	7570	2510	7320	6460	8800	
09/02/99	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	
03/14/00	15.57	5.26	0.00	10.31	2.39	31000	--	1600	4600	2300	7300	5700	8700	
05/31/00	15.57	5.60	0.00	9.97	-0.34	9970	--	598	1030	487	2060	2500	1670	
08/29/00	15.57	6.35	0.00	9.22	-0.75	7900	--	390	1500	280	1900	1800	1300	
12/01/00	15.57	7.06	0.00	8.51	-0.71	87500	--	1860	17400	5590	19400	6220	3790	
03/17/01	15.57	5.98	0.00	9.59	1.08	4310	--	371	59.0	280	682	321	433	
05/23/01	15.57	6.97	0.00	8.60	-0.99	45400	--	374	4490	2790	10900	ND	406	
09/24/01	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	
03/11/02	15.57	5.51	0.00	10.06	1.01	14000	--	75	1400	1100	3600	ND<250	150	
06/07/02	15.57	5.73	0.00	9.84	-0.22	14000	--	120	1200	1400	4700	540	200	
09/03/02	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>														

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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-2a continued</b>														
12/12/02	15.56	7.45	0.00	8.11	--	3400	--	80	260	210	1000	380	400	
03/13/03	--	5.85	0.00	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	1.8	2.4	2.4	
06/12/03	--	6.08	0.00	--	--	ND<50	--	0.59	0.69	ND<0.50	1.2	6.0	4.7	
09/12/03	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	
02/12/04	15.56	5.68	0.00	9.88	-0.05	160	--	2.6	4.8	13	48	7.2	7.9	
06/07/04	15.56	6.21	0.00	9.35	-0.53	94	--	0.80	1.2	2.1	9.1	4.5	3.7	
09/17/04	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	
03/15/05	15.56	5.52	0.00	10.04	0.32	--	92	0.84	1.7	2.4	9.8	--	ND<10	
05/17/05	15.56	5.55	0.00	10.01	-0.03	--	54	2.1	1.7	1.9	7.0	--	2.9	
07/27/05	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	
02/24/06	15.56	5.79	0.00	9.77	1.09	--	84	0.51	1.2	4.2	16	--	7.2	
05/30/06	15.56	5.62	0.00	9.94	0.17	--	69	0.90	2.2	3.7	14	--	4.1	
08/30/06	15.56	6.38	0.00	9.18	-0.76	--	77	ND<0.50	0.50	1.0	3.3	--	2.5	
11/22/06	15.56	6.60	0.00	8.96	-0.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	2.2	--	0.59	
02/23/07	15.56	6.05	0.00	9.51	0.55	--	ND<50	ND<0.50	0.66	ND<0.50	1.1	--	0.72	
05/18/07	15.56	6.29	0.00	9.27	-0.24	--	ND<50	ND<0.50	ND<0.50	0.68	1.6	--	0.81	
08/10/07	15.56	6.90	0.00	8.66	-0.61	--	ND<50	ND<0.50	ND<0.50	1.6	3.9	--	ND<0.50	
11/09/07	15.56	6.96	0.00	8.60	-0.06	--	ND<50	ND<0.50	ND<0.50	2.4	4.4	--	ND<0.50	
02/08/08	15.56	5.76	0.00	9.80	1.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
05/16/08	15.56	6.50	0.00	9.06	-0.74	--	ND<50	ND<0.50	ND<0.50	0.56	1.2	--	ND<0.50	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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-2A continued</b>														
08/15/08	15.56	7.35	0.00	8.21	-0.85	--	78	ND<0.50	0.79	2.9	6.5	--	ND<0.50	
11/26/08	15.56	8.12	0.00	7.44	-0.77	--	120	0.56	0.66	4.6	6.0	--	1.8	
02/24/09	18.51	6.19	0.00	12.32	4.88	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-3 (Screen Interval in feet: 5.0-20.0)</b>														
03/05/99	15.11	--	0.00	--	--	135	--	ND	ND	ND	4.84	--	2.46	
06/03/99	15.11	5.57	0.00	9.54	--	ND	--	ND	ND	ND	ND	5.23	12.7	
09/02/99	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	--	
03/14/00	15.11	4.87	0.00	10.24	2.41	ND	--	ND	ND	ND	ND	7.2	6.3	
05/31/00	15.11	5.58	0.00	9.53	-0.71	ND	--	ND	ND	ND	ND	ND	--	
08/29/00	15.11	6.06	0.00	9.05	-0.48	ND	--	ND	ND	ND	ND	ND	ND	
12/01/00	15.11	6.76	0.00	8.35	-0.70	ND	--	ND	ND	ND	ND	ND	--	
03/17/01	15.11	5.09	0.00	10.02	1.67	ND	--	ND	ND	ND	ND	ND	--	
05/23/01	15.11	5.72	0.00	9.39	-0.63	ND	--	ND	ND	ND	ND	ND	--	
09/24/01	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	--	
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	--	
03/11/02	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	--	
06/07/02	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
03/13/03	15.11	5.37	0.00	9.74	1.78	--	--	--	--	--	--	--	--	
06/12/03	15.11	5.51	0.00	9.60	-0.14	--	--	--	--	--	--	--	--	
09/12/03	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



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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>														
02/12/04	15.11	5.51	0.00	9.60	0.11	--	--	--	--	--	--	--	--	Monitored Only
06/07/04	15.11	5.92	0.00	9.19	-0.41	--	--	--	--	--	--	--	--	Monitored Only
09/17/04	15.11	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate
12/11/04	15.11	5.94	0.00	9.17	--	--	--	--	--	--	--	--	--	Sampled annually
03/11/05	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	
05/17/05	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	
07/27/05	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	
02/24/06	15.11	5.37	0.00	9.74	1.23	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.2	
05/30/06	15.11	5.08	0.00	10.03	0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.92	
08/30/06	15.11	5.52	0.00	9.59	-0.44	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	0.51	
11/22/06	15.11	6.38	0.00	8.73	-0.86	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	0.94	
02/23/07	15.11	5.72	0.00	9.39	0.66	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	0.61	
05/18/07	15.11	5.94	0.00	9.17	-0.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	1.1	
08/10/07	15.11	7.64	0.00	7.47	-1.70	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/09/07	15.11	6.75	0.00	8.36	0.89	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	1.1	
02/08/08	15.11	5.39	0.00	9.72	1.36	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
05/16/08	15.11	6.17	0.00	8.94	-0.78	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.2	
08/15/08	15.11	7.01	0.00	8.10	-0.84	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.3	
11/26/08	15.11	7.73	0.00	7.38	-0.72	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.8	
02/24/09	18.05	5.98	0.00	12.07	4.69	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.9	
05/28/09	18.05	5.64	0.00	12.41	0.34	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
09/14/09	18.05	6.88	0.00	11.17	-1.24	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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 (Screen Interval in feet: 5.0-20.5)</b>														
03/05/99	15.17	--	0.00	--	--	ND	--	ND	ND	ND	2.44	--	25.2	
06/03/99	15.17	5.45	0.00	9.72	--	ND	--	ND	ND	ND	ND	ND	3.96	
09/02/99	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	
03/14/00	15.17	4.67	0.00	10.50	2.60	ND	--	ND	ND	ND	ND	46	49	
05/31/00	15.17	5.48	0.00	9.69	-0.81	ND	--	ND	ND	ND	ND	ND	--	
08/29/00	15.17	6.10	0.00	9.07	-0.62	ND	--	ND	ND	ND	ND	6.1	3.2	
12/01/00	15.17	6.79	0.00	8.38	-0.69	ND	--	ND	ND	ND	ND	152	101	
03/17/01	15.17	5.01	0.00	10.16	1.78	ND	--	ND	ND	ND	ND	ND	--	
05/23/01	15.17	5.78	0.00	9.39	-0.77	ND	--	ND	ND	ND	ND	ND	--	
09/24/01	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	
03/11/02	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	--	
06/07/02	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	--	
09/03/02	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	
03/13/03	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	--	
06/12/03	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	--	
09/12/03	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	--	
02/12/04	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	--	
06/07/04	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	--	
09/17/04	15.17	6.86	0.00	8.31	-1.04	--	56	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	10	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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>														
12/11/04	15.17	6.01	0.00	9.16	0.85	--	350	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	380	
03/11/05	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	
05/17/05	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	
07/27/05	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	
02/24/06	15.17	5.19	0.00	9.98	1.40	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.7	
05/30/06	15.17	5.07	0.00	10.10	0.12	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
08/30/06	15.17	6.02	0.00	9.15	-0.95	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/22/06	15.17	6.37	0.00	8.80	-0.35	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	16	
02/23/07	15.17	5.61	0.00	9.56	0.76	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
05/18/07	15.17	5.87	0.00	9.30	-0.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
08/10/07	15.17	7.49	0.00	7.68	-1.62	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/09/07	15.17	6.77	0.00	8.40	0.72	--	50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	39	
02/08/08	15.17	5.10	0.00	10.07	1.67	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
05/16/08	15.17	6.06	0.00	9.11	-0.96	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
08/15/08	15.17	6.91	0.00	8.26	-0.85	--	ND<50	ND<0.50	ND<0.50	ND<0.50	1.1	--	ND<0.50	
11/26/08	15.17	7.71	0.00	7.46	-0.80	--	55	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	11	
02/24/09	18.14	5.96	0.00	12.18	4.72	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.8	
05/28/09	18.14	5.70	0.00	12.44	0.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
09/14/09	18.14	6.76	0.00	11.38	-1.06	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<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	
03/14/00	13.34	4.46	0.00	8.88	1.99	ND	--	ND	ND	ND	ND	ND	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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>														
05/31/00	13.34	5.18	0.00	8.16	-0.72	ND	--	ND	ND	ND	ND	ND	--	
08/29/00	13.34	5.46	0.00	7.88	-0.28	ND	--	ND	ND	ND	ND	ND	--	
12/01/00	13.34	5.95	0.00	7.39	-0.49	ND	--	ND	ND	ND	ND	ND	--	
03/17/01	13.34	5.36	0.00	7.98	0.59	ND	--	ND	ND	ND	ND	ND	--	
05/23/01	13.34	5.09	0.00	8.25	0.27	ND	--	ND	ND	ND	ND	ND	--	
09/24/01	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	--	
03/11/02	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	--	
06/07/02	13.34	--	--	--	--	--	--	--	--	--	--	--	--	Paved over
09/03/02	13.34	--	--	--	--	--	--	--	--	--	--	--	--	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	--	
03/13/03	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	--	
06/12/03	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	--	
09/12/03	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	--	
02/12/04	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	--	
06/07/04	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	--	
09/17/04	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
03/11/05	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	
05/17/05	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	
07/27/05	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	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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>														
02/24/06	13.34	5.08	0.00	8.26	0.78	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
05/30/06	13.34	5.01	0.00	8.33	0.07	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
08/30/06	13.34	5.65	0.00	7.69	-0.64	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/22/06	13.34	5.82	0.00	7.52	-0.17	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
02/23/07	13.34	4.47	0.00	8.87	1.35	--	ND<50	ND<0.50	ND<0.50	ND<0.50	0.53	--	ND<0.50	
05/18/07	13.34	5.51	0.00	7.83	-1.04	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
08/10/07	13.34	6.05	0.00	7.29	-0.54	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
11/09/07	13.34	6.10	0.00	7.24	-0.05	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
02/08/08	13.34	5.06	0.00	8.28	1.04	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
05/16/08	13.34	5.69	0.00	7.65	-0.63	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
08/15/08	13.34	6.35	0.00	6.99	-0.66	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/26/08	13.34	6.82	0.00	6.52	-0.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
02/24/09	16.45	5.10	0.00	11.35	4.83	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
05/28/09	16.45	5.12	0.00	11.33	-0.02	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
09/14/09	16.45	6.29	0.00	10.16	-1.17	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-6 (Screen Interval in feet: 5-20)</b>														
12/14/99	14.08	6.64	0.00	7.44	--	ND	--	ND	ND	ND	ND	11000	18000	
03/14/00	14.08	4.72	0.00	9.36	1.92	ND	--	ND	ND	ND	ND	19000	21000	
05/31/00	14.08	5.28	0.00	8.80	-0.56	ND	--	ND	ND	ND	ND	13200	--	
08/29/00	14.08	5.39	0.00	8.69	-0.11	ND	--	ND	ND	ND	ND	270	400	
12/01/00	14.08	6.11	0.00	7.97	-0.72	ND	--	ND	ND	ND	ND	6330	3640	
03/17/01	14.08	6.02	0.00	8.06	0.09	18700	--	2950	989	1040	3000	10200	11500	
05/23/01	14.08	5.82	0.00	8.26	0.20	ND	--	ND	ND	ND	ND	4660	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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>														
09/24/01	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	
03/11/02	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	
06/07/02	14.08	--	--	--	--	--	--	--	--	--	--	--	--	Paved over
09/03/02	14.08	--	--	--	--	--	--	--	--	--	--	--	--	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	
03/13/03	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 03/13/03	14.08	5.20	0.00	8.88	1.31	--	--	--	--	--	--	--	5100	
06/12/03	14.08	5.38	0.00	8.70	-0.18	1600	--	ND<10	ND<10	ND<10	ND<10	5200	3700	
09/12/03	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	--	
02/12/04	14.08	5.06	0.00	9.02	0.32	1100	--	ND<10	ND<10	ND<10	ND<10	1900	2800	
06/07/04	14.08	5.45	0.00	8.63	-0.39	2500	--	ND<3	ND<3	ND<3	ND<6	3200	2900	
09/17/04	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	
03/11/05	14.08	4.71	0.00	9.37	0.89	--	ND<1000	ND<10	ND<10	ND<10	ND<20	--	2500	
05/17/05	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	
07/27/05	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	
02/24/06	14.08	5.12	0.00	8.96	0.89	--	400	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	990	
05/30/06	14.08	5.04	0.00	9.04	0.08	--	ND<1200	ND<12	ND<12	ND<12	ND<25	--	560	
08/30/06	14.08	7.01	0.00	7.07	-1.97	--	930	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	820	
11/22/06	14.08	6.16	0.00	7.92	0.85	--	690	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	620	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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>														
02/23/07	14.08	5.44	0.00	8.64	0.72	--	190	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	410	
05/18/07	14.08	5.63	0.00	8.45	-0.19	--	390	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	620	
08/10/07	14.08	6.71	0.00	7.37	-1.08	--	390	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	660	
11/09/07	14.08	6.17	0.00	7.91	0.54	--	580	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	820	
02/08/08	14.08	5.20	0.00	8.88	0.97	--	360	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	570	
05/16/08	14.08	5.70	0.00	8.38	-0.50	--	200	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	480	
08/15/08	14.08	6.46	0.00	7.62	-0.76	--	160	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	450	
11/26/08	14.08	7.01	0.00	7.07	-0.55	--	300	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	400	
02/24/09	16.97	5.20	0.00	11.77	4.70	--	250	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	450	
05/28/09	16.97	5.26	0.00	11.71	-0.06	--	74	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	290	
09/14/09	16.97	6.30	0.00	10.67	-1.04	--	230	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	310	
<b>MW-7 (Screen Interval in feet: 25-30)</b>														
05/28/09	17.81	8.29	0.00	9.52	--	--	1100	ND<0.50	ND<0.50	1.4	7.1	--	15000	
09/14/09	17.81	6.77	0.00	11.04	1.52	--	7900	ND<25	ND<25	ND<25	ND<50	--	15000	
<b>MW-8 (Screen Interval in feet: 25-30)</b>														
05/28/09	18.13	7.42	0.00	10.71	--	--	850	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	12000	
09/14/09	18.13	6.97	0.00	11.16	0.45	--	3500	ND<25	ND<25	ND<25	ND<50	--	5600	
<b>MW-9 (Screen Interval in feet: 20-25)</b>														
05/28/09	18.75	6.24	0.00	12.51	--	--	1200	ND<0.50	ND<0.50	0.75	15	--	13000	
09/14/09	18.75	7.36	0.00	11.39	-1.12	--	280	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	390	
<b>MW-10 (Screen Interval in feet: 25-30)</b>														
05/28/09	18.84	6.69	0.00	12.15	--	--	700	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3500	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through September 2009**  
**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 8015 (µg/l)	TPH-G (GC/MS) (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-10 continued</b>														
09/14/09	18.84	7.50	0.00	11.34	-0.81	--	3300	ND<6.2	ND<6.2	ND<6.2	ND<12	--	4900	
<b>MW-11 (Screen Interval in feet: 25-30)</b>														
05/28/09	18.72	6.18	0.00	12.54	--	--	920	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	15000	
09/14/09	18.72	7.45	0.00	11.27	-1.27	--	11000	ND<25	ND<25	ND<25	ND<50	--	18000	



**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
<b>MW-1</b>												
09/02/99	ND	ND	--	--	ND	ND	ND	--	--	--	--	--
03/15/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/06	62	ND<250	--	--	ND<0.50	ND<0.50	5.5	--	--	--	--	--
11/22/06	74	ND<250	--	--	ND<0.50	ND<0.50	0.51	--	--	--	--	--
02/23/07	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
05/18/07	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
08/10/07	ND<500	ND<12000	--	--	ND<25	ND<25	ND<25	--	--	--	--	--
11/09/07	ND<500	ND<12000	--	--	ND<25	ND<25	ND<25	--	--	--	--	--
02/08/08	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
05/16/08	ND<250	ND<6200	--	--	ND<12	ND<12	ND<12	--	--	--	--	--
08/15/08	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	2.5	1.3	--	--	ND<100	ND<1.0
05/28/09	ND<200	ND<5000	ND<10	ND<10	ND<10	ND<10	ND<10	1.8	2.0	87	ND<500	2.4
09/14/09	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	1.4	2.2	220	ND<100	3.7
<b>MW-1AR</b>												
05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.6	--	--	--	--	--
09/14/09	110	ND<500	--	--	ND<1.0	ND<1.0	ND<1.0	4.5	ND<2.0	170	2500	570
<b>MW-1BR</b>												
05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.0	--	--	--	--	--
09/14/09	33	ND<500	--	--	ND<1.0	ND<1.0	1.9	3.7	ND<2.0	250	ND<500	230
<b>MW-2</b>												
09/02/99	ND	ND	--	--	ND	ND	ND	--	--	--	--	--
12/14/99	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
<b>MW-2 continued</b>												
03/14/00	1300	ND	ND	ND	ND	ND	ND	--	--	--	--	--
05/31/00	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
08/29/00	250	ND	ND	ND	ND	ND	ND	--	--	--	--	--
12/01/00	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
03/17/01	ND	ND	ND	ND	14.8	ND	ND	--	--	--	--	--
05/23/01	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
09/24/01	ND<5000	ND<5000000	ND<100	ND<100	ND<100	ND<100	ND<100	--	--	--	--	--
12/10/01	ND<500	ND<1200000	ND<25	ND<25	ND<25	ND<25	ND<25	--	--	--	--	--
03/11/02	ND<1000	ND<5000000	ND<20	ND<20	ND<20	ND<20	ND<20	--	--	--	--	--
06/07/02	ND<1000	ND<2000000	ND<25	ND<25	ND<25	ND<25	ND<25	--	--	--	--	--
09/03/02	ND<1000	ND<5000000	ND<20	ND<20	ND<20	ND<20	ND<20	--	--	--	--	--
<b>MW-2a</b>												
12/12/02	ND<100	ND<500000	ND<2.0	2.3	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
03/13/03	ND<100	ND<500000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
06/12/03	ND<100	ND<500000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
09/12/03	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
12/31/03	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
02/12/04	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
06/07/04	ND<12	ND<800	ND<0.5	ND<0.5	ND<1	ND<1	ND<1	--	--	--	--	--
09/17/04	6.7	ND<50	--	--	ND<1.0	ND<0.50	ND<0.50	--	--	--	--	--
12/11/04	ND<5.0	ND<50	--	--	ND<1.0	ND<0.50	ND<0.50	--	--	--	--	--
03/15/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/17/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
07/27/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
<b>MW-2A continued</b>												
02/24/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/22/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/09/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/08/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	17	--	--	110	ND<1.0
<b>MW-3</b>												
09/02/99	ND	ND	--	--	ND	ND	ND	--	--	--	--	--
03/11/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/17/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
07/27/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/22/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
<b>MW-3 continued</b>												
08/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/09/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/08/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	3.2	--	--	ND<100	ND<1.0
05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
09/14/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
<b>MW-4</b>												
09/02/99	ND	ND	--	--	ND	ND	ND	--	--	--	--	--
12/10/01	ND<290	ND<7100000	ND<14	ND<14	ND<14	ND<14	ND<14	--	--	--	--	--
12/12/02	ND<100	ND<500000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
09/12/03	--	ND<500	--	--	--	--	--	--	--	--	--	--
09/17/04	ND<5.0	ND<50	--	--	ND<1.0	ND<0.50	ND<0.50	--	--	--	--	--
12/11/04	ND<25	ND<250	--	--	ND<5.0	ND<2.5	ND<2.5	--	--	--	--	--
03/11/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/17/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
07/27/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/22/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
<b>MW-4 continued</b>												
05/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/09/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/08/08	ND<10	290	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	1.7	--	--	ND<100	3.1
05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
09/14/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
<b>MW-5</b>												
09/12/03	--	ND<500	--	--	--	--	--	--	--	--	--	--
03/11/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/17/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
07/27/05	ND<5.0	ND<50	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/06	59	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/30/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/22/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/09/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/08/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
<b>MW-5 continued</b>												
05/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	4.5	--	--	ND<100	ND<1.0
05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
09/14/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
<b>MW-6</b>												
03/17/01	ND	ND	ND	219	ND	ND	ND	--	--	--	--	--
09/24/01	ND<100	ND<1000000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
12/10/01	ND<500	ND<12000000	ND<25	ND<25	ND<25	ND<25	ND<25	--	--	--	--	--
03/11/02	ND<100	ND<500000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--
12/12/02	ND<10000	ND<50000000	ND<200	ND<200	ND<200	ND<200	ND<200	--	--	--	--	--
03/13/03	ND<5000	ND<25000000	ND<100	ND<100	ND<100	ND<100	ND<100	--	--	--	--	--
06/12/03	ND<2000	ND<10000000	ND<40	ND<40	ND<40	ND<40	ND<40	--	--	--	--	--
09/12/03	--	ND<2500	--	--	--	--	--	--	--	--	--	--
02/12/04	ND<2000	ND<10000	ND<40	ND<40	ND<40	ND<40	ND<40	--	--	--	--	--
06/07/04	ND<200	ND<8000	ND<5	ND<5	ND<10	ND<10	ND<10	--	--	--	--	--
09/17/04	ND<100	ND<1000	--	--	ND<20	ND<10	ND<10	--	--	--	--	--
12/11/04	ND<100	ND<1000	--	--	ND<20	ND<10	ND<10	--	--	--	--	--
03/11/05	ND<100	ND<1000	--	--	ND<10	ND<10	ND<10	--	--	--	--	--
05/17/05	ND<100	ND<1000	--	--	ND<10	ND<10	ND<10	--	--	--	--	--
07/27/05	ND<100	ND<1000	--	--	ND<10	ND<10	ND<10	--	--	--	--	--
11/23/05	ND<10	ND<250	--	--	ND<0.50	ND<0.50	1.0	--	--	--	--	--
02/24/06	ND<10	ND<250	--	--	ND<0.50	ND<0.50	0.68	--	--	--	--	--
05/30/06	ND<250	ND<6200	--	--	ND<12	ND<12	ND<12	--	--	--	--	--

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
<b>MW-6 continued</b>												
08/30/06	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
11/22/06	ND<100	ND<2500	--	--	ND<5.0	ND<5.0	ND<5.0	--	--	--	--	--
02/23/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/18/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/10/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/09/07	ND<10	ND<250	--	--	ND<0.50	ND<0.50	0.52	--	--	--	--	--
02/08/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
05/16/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
08/15/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
11/26/08	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
02/24/09	ND<10	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	2.7	--	--	ND<100	1.2
05/28/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
09/14/09	23	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--
<b>MW-7</b>												
05/28/09	150	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	11	--	--	--	--	--
09/14/09	680	ND<12000	--	--	ND<25	ND<25	ND<25	9.8	ND<2.0	76	3200	2000
<b>MW-8</b>												
05/28/09	36	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.7	9.9	ND<2.0	140	ND<1000	280
09/14/09	ND<500	ND<12000	--	--	ND<25	ND<25	ND<25	14	ND<2.0	60	480	1000
<b>MW-9</b>												
05/28/09	40	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	11	--	--	--	--	--
09/14/09	24	ND<250	--	--	ND<0.50	ND<0.50	ND<0.50	3.0	ND<2.0	520	ND<1000	180
<b>MW-10</b>												
05/28/09	39	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.6	2.4	2.0	ND<10	150	280

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Carbon (organic, total) (mg/l)	Chromium VI (µg/l)	Chromium (total) (µg/l)	Iron Ferrous (µg/l)	Manganese (dissolved) (µg/l)
<b>MW-10 continued</b>												
09/14/09	240	ND<3100	--	--	ND<6.2	ND<6.2	ND<6.2	2.7	ND<2.0	24	210	280
<b>MW-11</b>												
05/28/09	140	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.4	--	--	--	--	--
09/14/09	850	ND<12000	--	--	ND<25	ND<25	ND<25	3.3	ND<2.0	14	310	570



**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

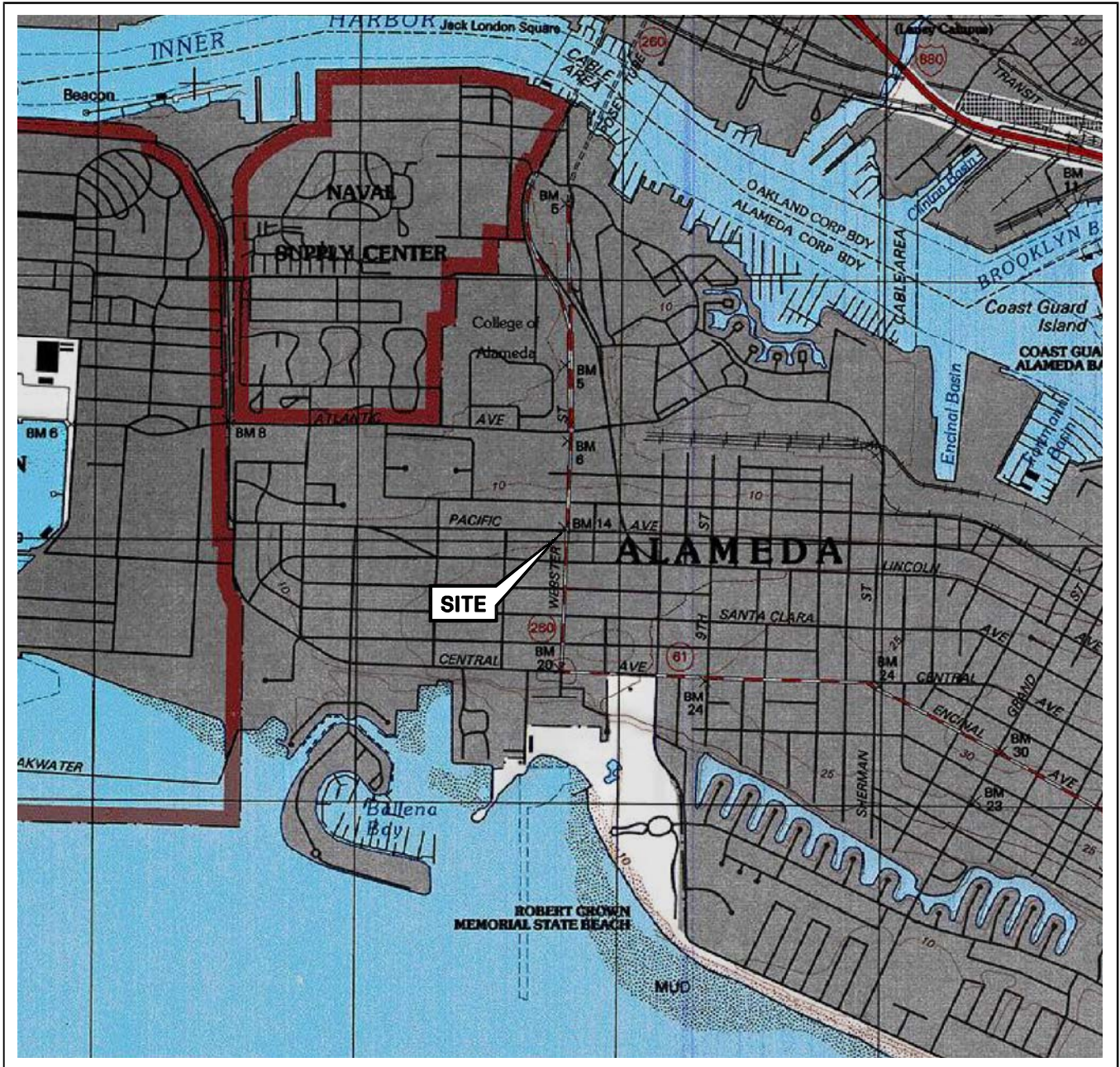
Date Sampled	Manganese (total) (µg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	Dissolved Oxygen (Lab) (mg O/)	Redox Potential (ORP-Lab) (mV)	Specific Conductance (µmhos)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)	Post-purge ORP (mV)
<b>MW-1</b>										
02/24/09	500	--	18	--	--	--	4.63	3.22	57	59
05/28/09	550	9.9	25	8.6	130	463	0.80	2.95	119	171
09/14/09	1600	11	25	6.8	204	429	1.93	3.81	233	146
<b>MW-1AR</b>										
05/28/09	--	--	--	--	--	--	1.72	0.95	144	177
09/14/09	830	17	39	7.0	205	655	1.68	1.83	235	187
<b>MW-1BR</b>										
05/28/09	--	--	--	--	--	--	0.61	1.37	145	165
09/14/09	930	17	59	6.7	207	673	0.46	1.02	228	143
<b>MW-2A</b>										
02/24/09	130	--	87	--	--	--	3.38	4.44	50	34
<b>MW-3</b>										
02/24/09	1100	--	130	--	--	--	5.01	2.30	46	49
05/28/09	--	--	--	--	--	--	0.61	4.03	141	85
09/14/09	--	--	--	6.6	196	658	0.49	2.02	146	119
<b>MW-4</b>										
02/24/09	250	--	130	--	--	--	6.15	4.27	61	64
05/28/09	--	--	--	--	--	--	3.68	3.76	141	55
09/14/09	--	--	--	7.1	195	1020	2.16	2.78	142	63
<b>MW-5</b>										
02/24/09	720	--	64	--	--	--	5.65	2.58	27	34
05/28/09	--	--	--	--	--	--	1.71	4.32	138	94
09/14/09	--	--	--	4.0	204	609	0.64	2.08	147	115

**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	Manganese (total) (µg/l)	Nitrogen as Nitrate (mg/l)	Sulfate (mg/l)	Dissolved Oxygen (Lab) (mg O/)	Redox Potential (ORP-Lab) (mV)	Specific Conductance (µmhos)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)	Post-purge ORP (mV)
<b>MW-6</b>										
02/24/09	2300	--	85	--	--	--	3.40	1.29	68	67
05/28/09	--	--	--	--	--	--	1.06	1.85	142	56
09/14/09	--	--	--	7.1	205	595	0.46	1.07	154	118
<b>MW-7</b>										
05/28/09	--	--	--	--	--	--	1.24	0.63	160	124
09/14/09	2200	4.2	180	6.9	217	1030	0.26	1.35	-13	-53
<b>MW-8</b>										
05/28/09	830	12	130	9.0	124	923	2.22	1.38	146	68
09/14/09	1300	7.7	260	6.2	407	1100	0.28	1.11	151	92
<b>MW-9</b>										
09/14/09	4700	5.0	68	7.3	204	580	3.58	4.16	236	171
<b>MW-10</b>										
05/28/09	350	9.1	30	7.1	139	661	0.30	1.76	151	156
09/14/09	380	6.3	33	6.1	205	675	2.19	0.67	235	114
<b>MW-11</b>										
05/28/09	--	--	--	--	--	--	0.22	0.80	1.56	147
09/14/09	740	0.73	37	6.7	192	780	0.81	0.82	224	49

# FIGURES

PS=1:1 L:\GMS VICINITY M A P S\0843\W.DWG Aug 12, 2009 - 9:03am ackers



SOURCE:

United States Geological Survey  
7.5 Minute Topographic Map:  
Oakland West Quadrangle

0 1/4 1/2 3/4 1 MILE



SCALE 1:24,000



QUADRANGLE  
LOCATION









FACILITY:

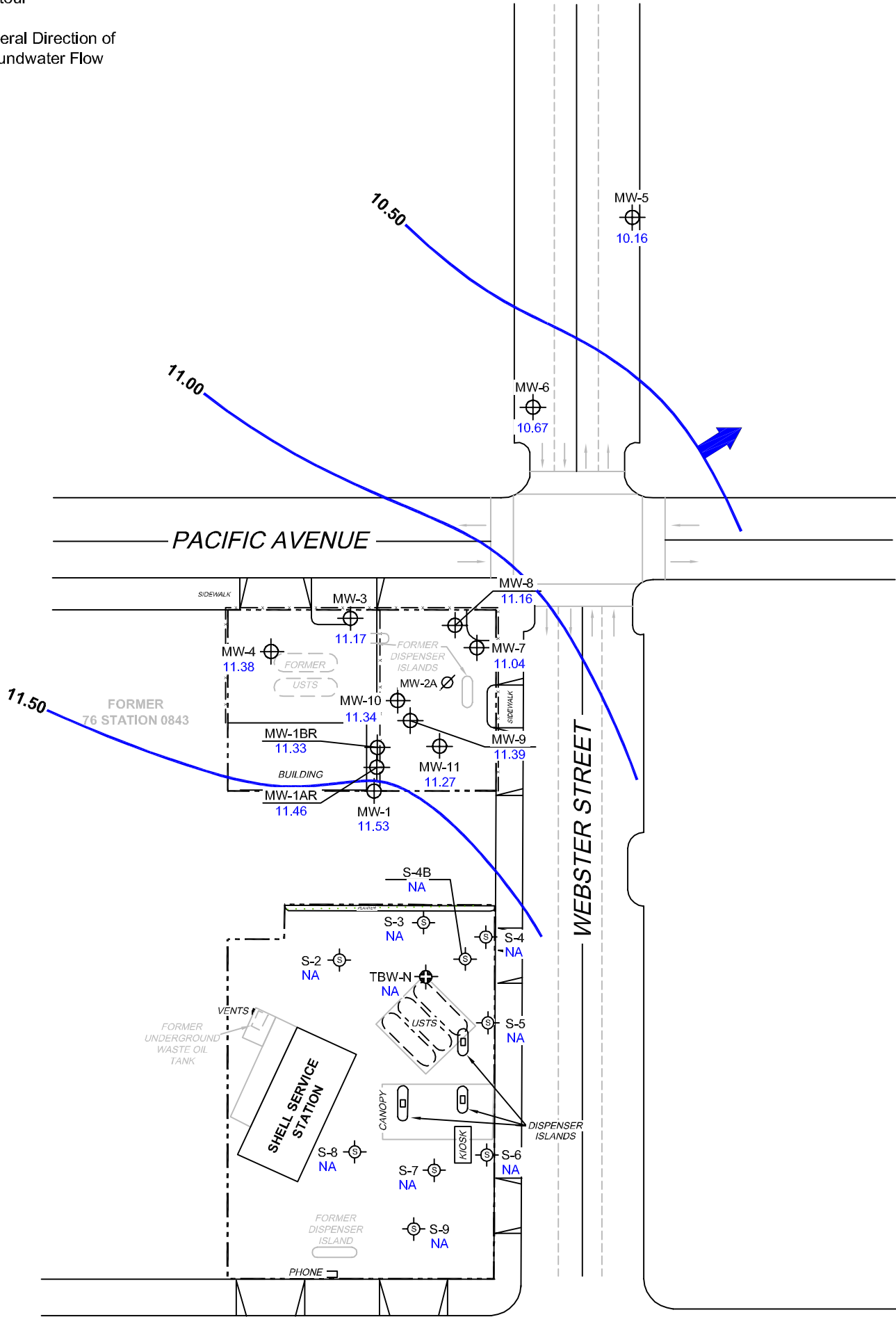
FORMER 76 STATION 0843  
1629 WEBSTER STREET  
ALAMEDA, CALIFORNIA

VICINITY MAP

FIGURE 1

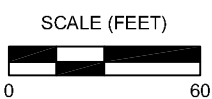
**LEGEND**

- MW-11  Former 76 Monitoring Well with Groundwater Elevation ( feet)
- S-9  Shell Service Station Monitoring Well
- TBW-N  Shell Tank Backfill Monitoring Well
- MW-2A  Abandoned Well
- 11.50  Groundwater Elevation Contour
-  General Direction of Groundwater Flow



**NOTES:**

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. NA = not analyzed, measured, or collected. UST = underground storage tank. Shell Service Station data not provided this quarter.





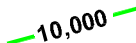


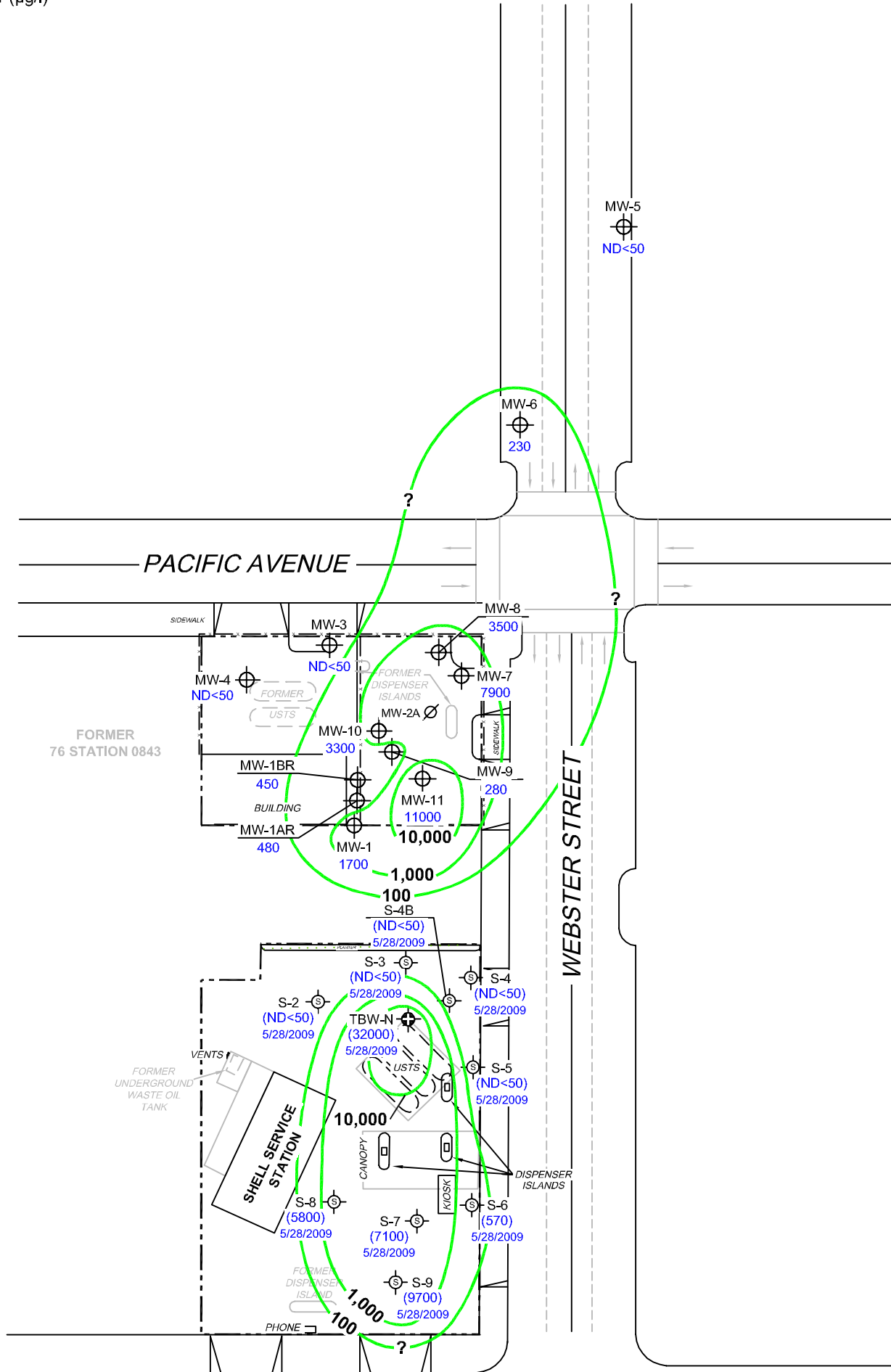
PROJECT: 165521  
 FACILITY:  
 FORMER 76 STATION 0843  
 1629 WEBSTER STREET  
 ALAMEDA, CALIFORNIA

**GROUNDWATER ELEVATION  
 CONTOUR MAP**  
 September 14, 2009

**FIGURE 2**

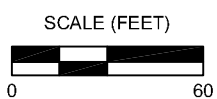
**LEGEND**

- MW-11  Former 76 Monitoring Well with Dissolved-Phase TPH-G (GC/MS) Concentration (µg/l)
- S-9  Shell Service Station Monitoring Well
- TBW-N  Shell Tank Backfill Monitoring Well
- MW-2A  Abandoned Well
-  10,000 Dissolved-Phase TPH-G (GC/MS) Contour (µg/l)



**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples.  
 TPH-G (GC/MS) = total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B.  
 µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report.  
 ( ) = representative historical value. UST = underground storage tank. Shell Service Station data not provided this quarter.





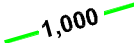


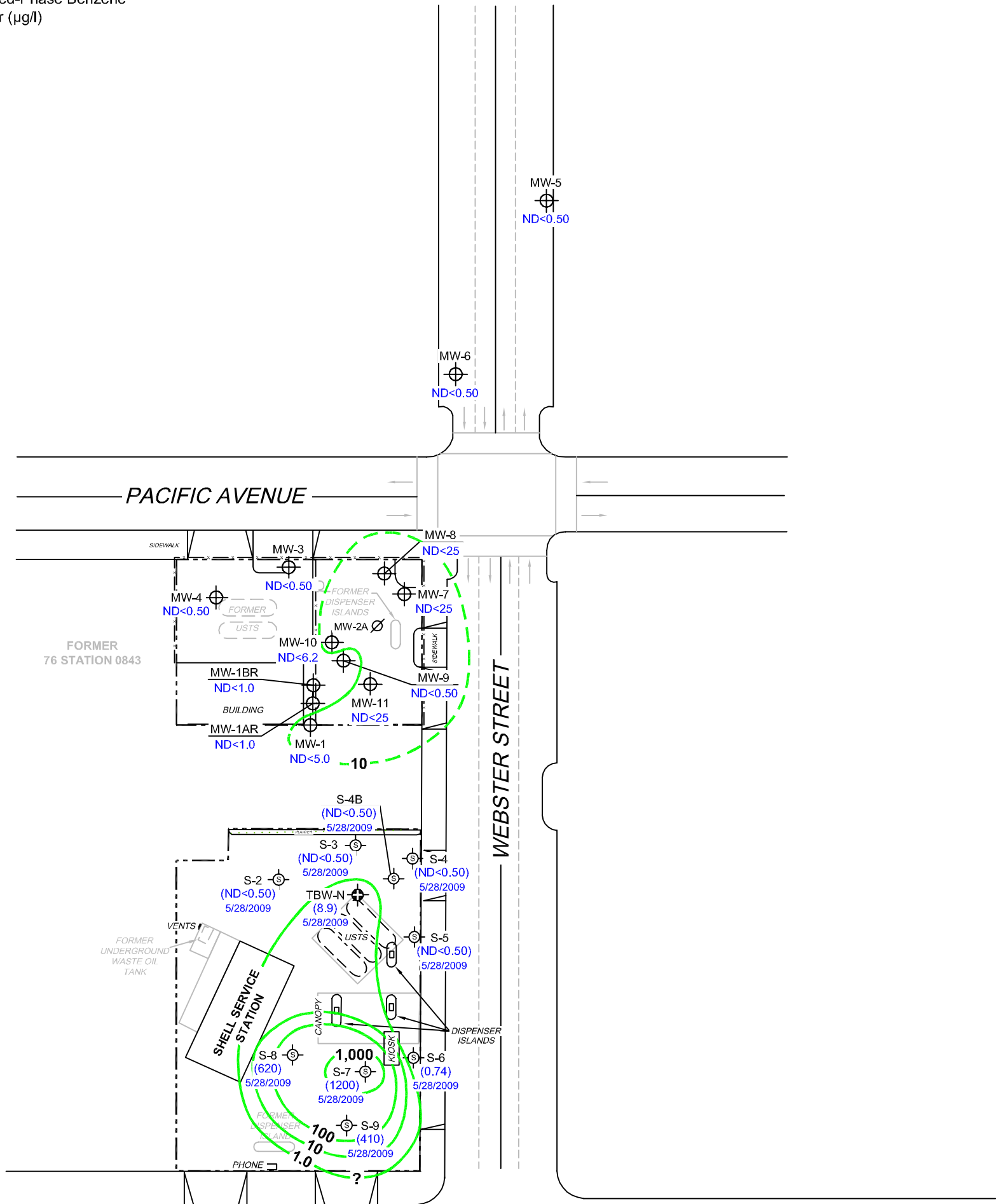
PROJECT: 165521  
 FACILITY:  
 FORMER 76 STATION 0843  
 1629 WEBSTER STREET  
 ALAMEDA, CALIFORNIA

**DISSOLVED-PHASE TPH-G (GC/MS)  
 CONCENTRATION MAP  
 September 14, 2009**

**FIGURE 3**

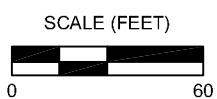
**LEGEND**

- MW-11  Former 76 Monitoring Well with Dissolved-Phase Benzene Concentration ( $\mu\text{g/l}$ )
- S-9  Shell Service Station Monitoring Well
- TBW-N  Shell Tank Backfill Monitoring Well
- MW-2A  Abandoned Well
-  1,000 Dissolved-Phase Benzene Contour ( $\mu\text{g/l}$ )



**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples.  $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report. Dashes indicate contour based on non-detect at elevated detection limit. ( ) = representative historical value. UST = underground storage tank. Shell Service Station data not provided this quarter.





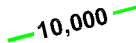


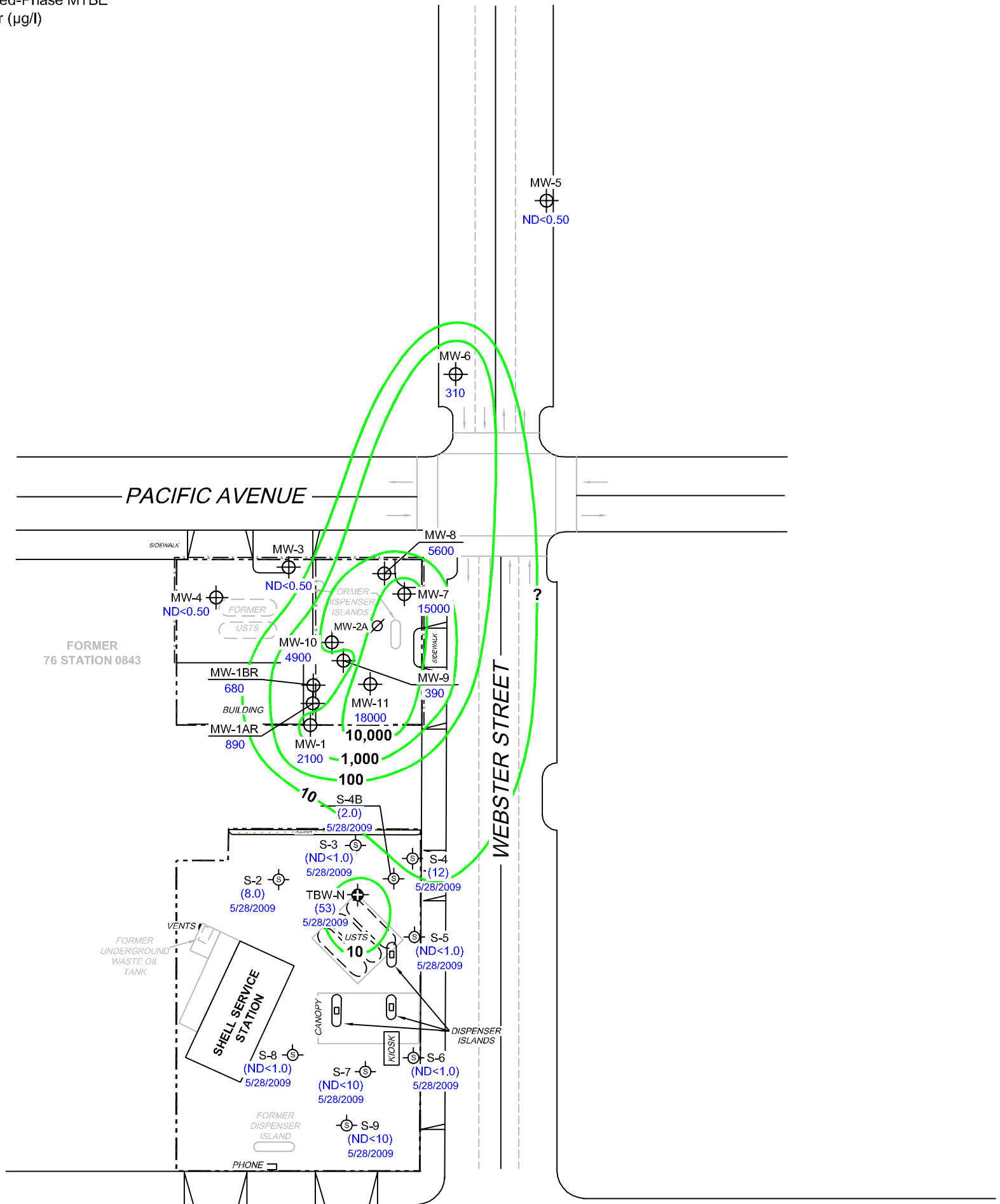
PROJECT: 165521  
 FACILITY:  
 FORMER 76 STATION 0843  
 1629 WEBSTER STREET  
 ALAMEDA, CALIFORNIA

**DISSOLVED-PHASE BENZENE  
 CONCENTRATION MAP**  
 September 14, 2009

**FIGURE 4**

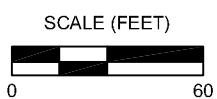
**LEGEND**

- MW-11  Former 76 Monitoring Well with Dissolved-Phase MTBE Concentration ( $\mu\text{g/l}$ )
- S-9  Shell Service Station Monitoring Well
- TBW-N  Shell Tank Backfill Monitoring Well
- MW-2A  Abandoned Well
-  10,000 Dissolved-Phase MTBE Contour ( $\mu\text{g/l}$ )



**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. MTBE = methyl tertiary butyl ether.  $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report. ( ) = representative historical value. UST = underground storage tank. Shell Service Station data not provided this quarter. Results obtained using EPA Method 8260B.








PROJECT: 165521  
 FACILITY:  
 FORMER 76 STATION 0843  
 1629 WEBSTER STREET  
 ALAMEDA, CALIFORNIA

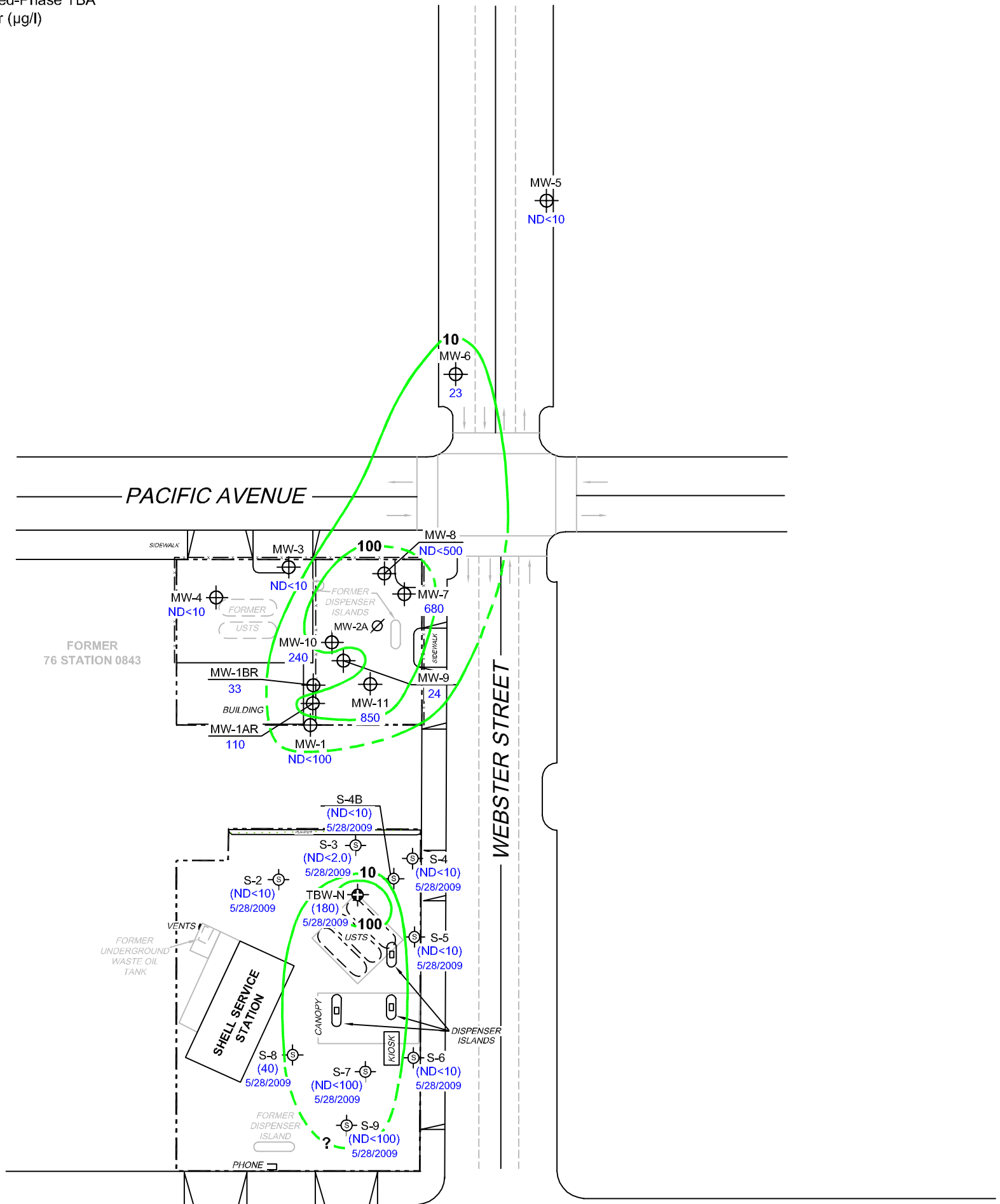
**DISSOLVED-PHASE MTBE  
 CONCENTRATION MAP  
 September 14, 2009**

**FIGURE 5**



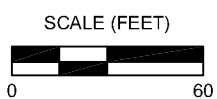
**LEGEND**

- MW-11  Former 76 Monitoring Well with Dissolved-Phase TBA Concentration ( $\mu\text{g/l}$ )
- S-9  Shell Service Station Monitoring Well
- TBW-N  Shell Tank Backfill Monitoring Well
- MW-2A  Abandoned Well
-  100 Dissolved-Phase TBA Contour ( $\mu\text{g/l}$ )



**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. TBA = tertiary butyl alcohol.  $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report. Dashes indicate contour based on non-detect at elevated detection limit. ( ) = representative historical value. UST = underground storage tank. Shell Service Station data not provided this quarter. Results obtained using EPA Method 8260B.



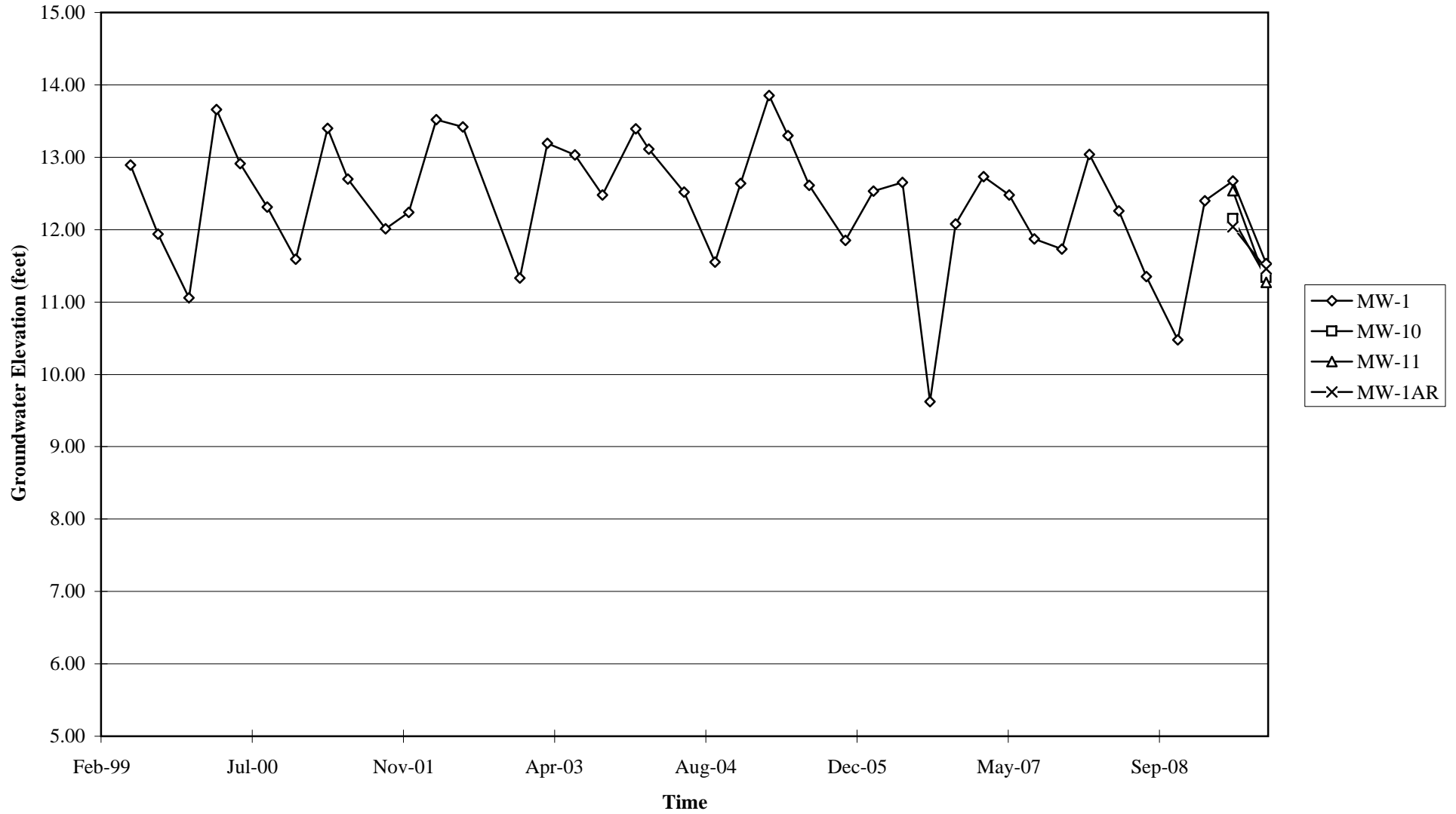
PROJECT: 165521  
 FACILITY:  
 FORMER 76 STATION 0843  
 1629 WEBSTER STREET  
 ALAMEDA, CALIFORNIA

**DISSOLVED-PHASE TBA  
 CONCENTRATION MAP**  
 September 14, 2009

**FIGURE 6**

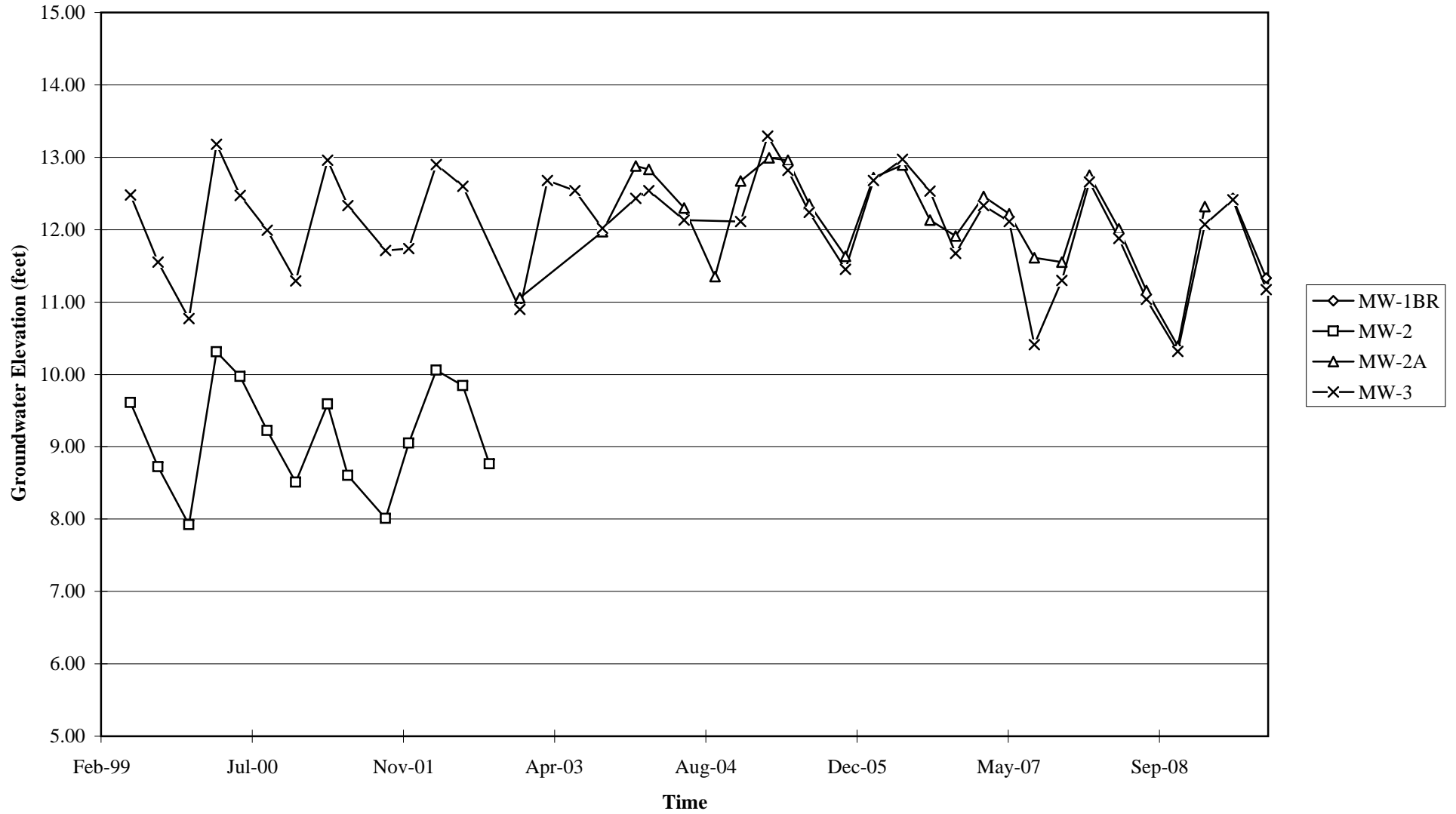
# GRAPHS

Groundwater Elevations vs. Time  
Former 76 Station 0843



Elevations may have been corrected for apparent changes due to resurvey

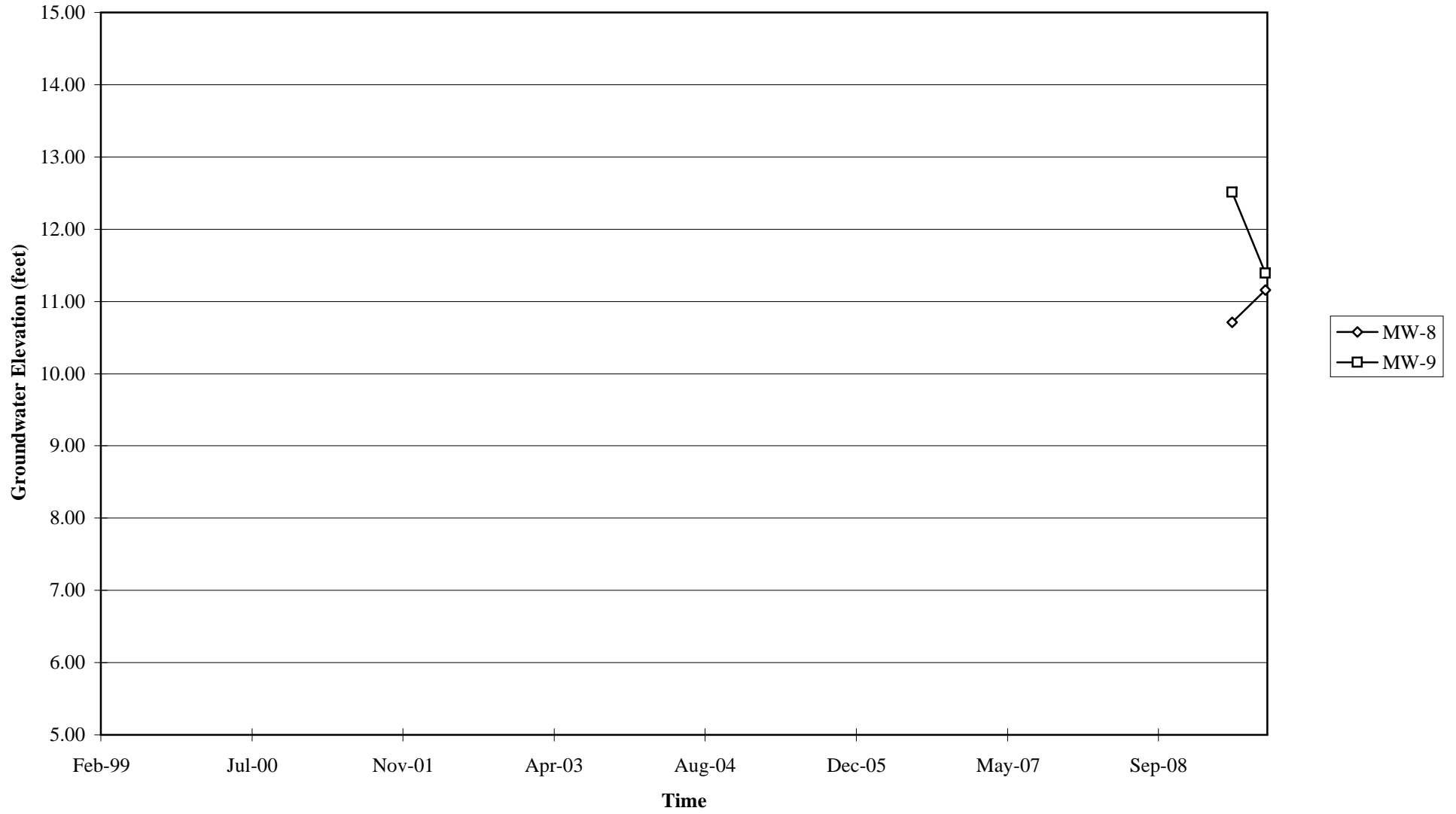
Groundwater Elevations vs. Time  
Former 76 Station 0843



Elevations may have been corrected for apparent changes due to resurvey

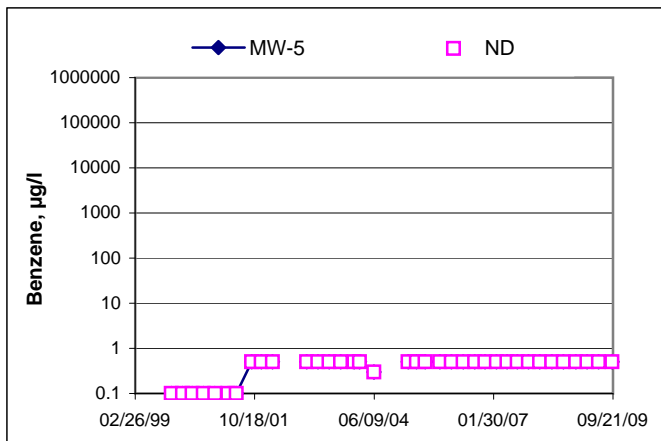
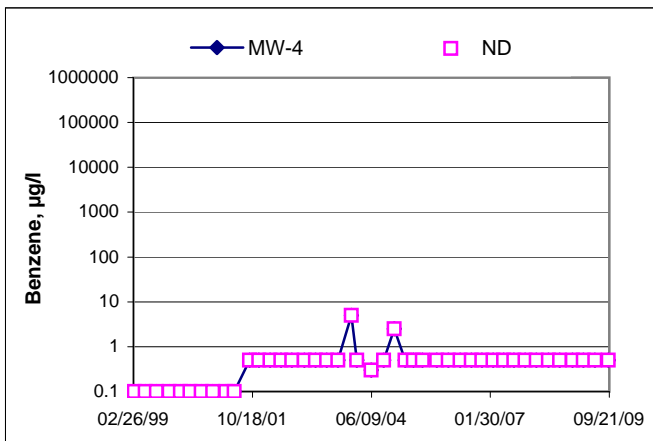
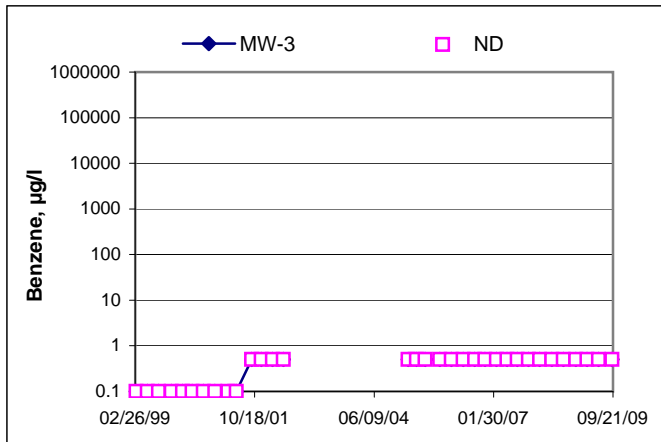
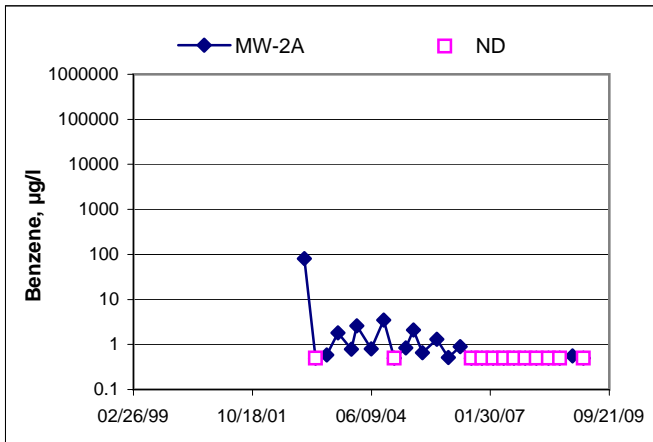
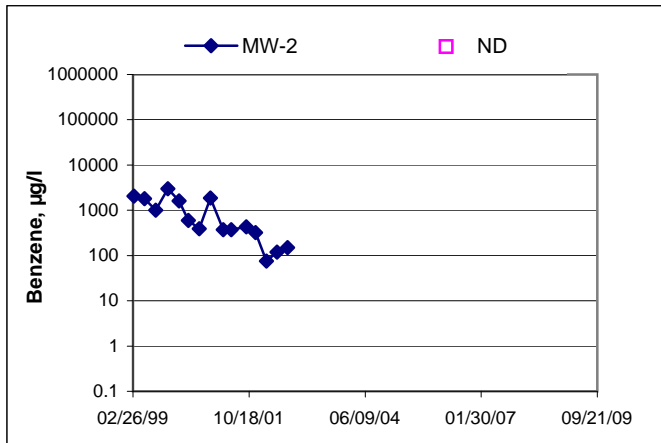
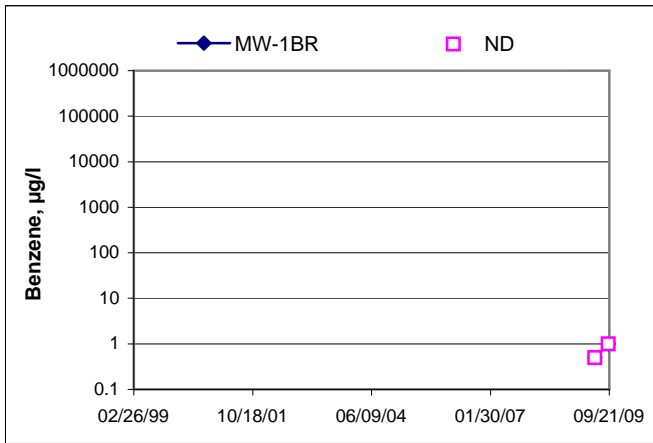
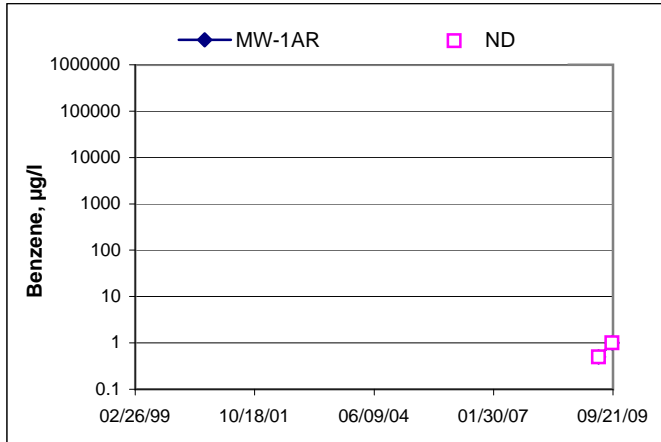
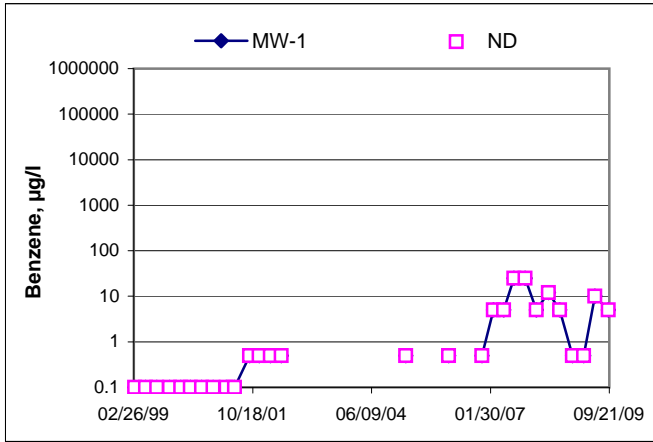


Groundwater Elevations vs. Time  
Former 76 Station 0843



Elevations may have been corrected for apparent changes due to resurvey

## Benzene Concentrations vs Time Former 76 Station 0843







# GENERAL FIELD PROCEDURES

## **Groundwater Monitoring and Sampling Assignments**

For each site, TRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater monitoring and sampling assignment for the site. TSRs are based on client directives, instructions from the primary environmental consultant for the site, regulatory requirements, and TRC's previous experience with the site.

## **Fluid Level Measurements**

Initial site activities include determination of well locations based on a site map provided with the TSR. Well boxes are opened and caps are removed. Indications of well or well box damage or of pressure buildup in the well are noted.

Fluid levels in each well are measured using a coated cloth tape equipped with an electronic interface probe, which distinguishes between liquid phase hydrocarbon (LPH) and water. The depth to LPH (if it is present), to water, and to the bottom of the well are measured from the top of the well casing (surveyors mark or notch if present) to the nearest 0.01 foot. Unless otherwise instructed, a well with less than 0.67 foot between the measured top of water and the measured bottom of the well casing is considered dry, and is not sampled. If the well contains 0.67 foot or more of water, an attempt is made to bail and/or sample as specified on the TSR.

Wells that are found to contain LPH are not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed. Bailed fluids are placed in a container separate from normal purge water, and properly disposed.

## **Purging and Groundwater Parameter Measurement**

TSR instructions may specify that a well not be purged (no-purge sampling), be purged using low-flow methods, or be purged using conventional pump and/or bail methods. Conventional purging generally consists of pumping or bailing until a minimum of three casing volumes of water have been removed or until the well has been pumped dry. Pumping is generally accomplished using submersible electric or pneumatic diaphragm pumps.

During conventional purging, three groundwater parameters (temperature, pH, and conductivity) are measured after removal of each casing volume. Stabilization of these parameters, to within 10 percent, confirm that sufficient purging has been completed. In some cases, the TSR indicates that other parameters are also to be measured during purging. TRC commonly measures dissolved oxygen (DO), oxidation-reduction potential (ORP), and/or turbidity. Instruments used for groundwater parameter measurements are calibrated daily according to manufacturer's instructions.

Low-flow purging utilizes a bladder or peristaltic pump to remove water from the well at a low rate. Groundwater parameters specified by the TSR are measured continuously until they become stable in general accordance with EPA guidelines.

Purge water is generally collected in labeled drums for disposal. Drums may be left on site for disposal by others, or transported to a collection location for eventual transfer to a licensed treatment or recycling facility. In some cases, purge water may be collected directly from the site by a licensed vacuum truck company, or may be treated on site by an active remediation system, if so directed.

## **Groundwater Sample Collection**

After wells are purged, or not purged, according to TSR instructions, samples are collected for laboratory analysis. For wells that have been purged using conventional pump or bail methods, sampling is conducted after the well has recovered to 80 percent of its original volume or after two hours if the well does not recover to at least 80 percent. If there is insufficient recharge of water in the well after two hours, the well is not sampled.

Samples are collected by lowering a new, disposable, ½-inch to 4-inch polyethylene bottom-fill bailer to just below the water level in the well. The bailer is retrieved and the water sample is carefully transferred to containers specified for the laboratory analytical methods indicated by the TSR. Particular care is given to containers for volatile organic analysis (VOAs) which require filling to zero headspace and fitting with Teflon-sealed caps.

After filling, all containers are labeled with project number (or site number), well designation, sample date, sample time, and the sampler's initials, and placed in an insulated chest with ice. Samples remain chilled prior to and during transport to a state-certified laboratory for analysis. Sample container descriptions and requested analyses are entered onto a chain-of-custody form in order to provide instructions to the laboratory. The chain-of-custody form accompanies the samples during transportation to provide a continuous record of possession from the field to the laboratory. If a freight or overnight carrier transports the samples, the carrier is noted on the form.

For wells that have been purged using low-flow methods, sample containers are filled from the effluent stream of the bladder or peristaltic pump. In some cases, if so specified by the TSR, samples are taken from the sample ports of actively pumping remediation wells.

## **Sequence of Gauging, Purging and Sampling**

The sequence in which monitoring activities are conducted is specified on the TSR. In general, wells are gauged beginning with the least affected well and ending with the well that has the highest concentration based on previous analytic results. After all gauging for the site is completed, wells are purged and/or sampled from the least-affected to the most-affected well.

## **Decontamination**

In order to reduce the possibility of cross contamination between wells, strict isolation and decontamination procedures are observed. Portable pumps are not used in wells with LPH. Technicians wear nitrile gloves during all gauging, purging, and sampling activities. Gloves are changed between wells and more often if warranted. Any equipment that could come in contact with fluids are either dedicated a particular well, decontaminated prior to each use, or discarded after a single use. Decontamination consists of washing in a solution of Liqui-nox and water and rinsing twice. The final rinse is in deionized water.

## **Exceptions**

Additional tasks or non-standard procedures, if any, that may be requested or required for a particular site, and noted on the site TSR, are documented in field notes on the following pages.

# FIELD MONITORING DATA SHEET

Technician: Andrew Vidwers

Job #/Task #: 165521 / FAZO

Date: 9/14/09

Site # 0843

Project Manager A. Collins

Page 1 of 2

Well #	TOC	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
MW-4	✓	0643	18.24	6.76	—	—	0811	2"
MW-3	✓	0650	19.91	6.88	—	—	0833	2"
MW-5	✓	0700	20.28	6.29	—	—	0855	2"
MW-6	✓	0710	20.12	6.30	—	—	0916	2"
MW-8	✓	0720	29.58	6.97	—	—	1020	2"
MW-7	✓	0731	29.16	6.77	—	—	1034	2"

FIELD DATA COMPLETE      QA/QC      COC      WELL BOX CONDITION SHEETS

MANIFEST      DRUM INVENTORY      TRAFFIC CONTROL



## FIELD MONITORING DATA SHEET

Technician: Ricky H

Job #/Task #: 165521 / FA20

Date: 09/14/09

Site # 0843

Project Manager A. Collins

Page 2 of 2

Well #	TOC	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
mw-1B2	✓	0641	34.50	7.80	—	—	0816	2"
mw-1AR	✓	0647	29.80	7.83	—	—	0835	2"
mw-10	✓	0652	29.23	7.50	—	—	0859	2"
mw-1	✓	0657	19.85	7.60	—	—	0922	2"
mw-9	✓	0702	24.40	7.36	—	—	1000	2"
mw-11	✓	0706	27.49	7.45	—	—	1027	2"

FIELD DATA COMPLETE	QA/QC	COC
WELL BOX CONDITION SHEETS		
MANIFEST	DRUM INVENTORY	TRAFFIC CONTROL



# GROUNDWATER SAMPLING FIELD NOTES

Technician: A. Vidners

Site: 0843

Project No.: 165521

Date: 9/14/09

Well No. MW-4

Purge Method: sub

Depth to Water (feet): 6.76

Depth to Product (feet):           

Total Depth (feet): 18.24

LPH & Water Recovered (gallons):           

Water Column (feet): 11.48

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 9.06

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>							2.78	142	
0800			2	1168	18.0	6.80			
			4	1177	18.1	6.84			
	0804		6	1191	18.2	6.88			
Post	PURGE						2.16	63	
Static at Time Sampled			Total Gallons Purged			Sample Time			
9.06			6			0811			
<b>Comments:</b>									

Well No. MW-3

Purge Method: sub

Depth to Water (feet): 6.88

Depth to Product (feet):           

Total Depth (feet): 19.91

LPH & Water Recovered (gallons):           

Water Column (feet): 13.03

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 9.49

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>							2.02	146	
0824			3	675.5	19.6	7.41			
			6	637.1	21.0	7.20			
	0828		9	688.5	21.3	6.99			
Post	PURGE						0.49	119	
Static at Time Sampled			Total Gallons Purged			Sample Time			
6.93			9			0833			
<b>Comments:</b>									

## GROUNDWATER SAMPLING FIELD NOTES

Technician: A. Vidners

Site: 0843

Project No.: 165521

Date: 9/14/09

Well No. MW-5

Purge Method: Sub

Depth to Water (feet): 6.29

Depth to Product (feet): —

Total Depth (feet): 20.28

LPH & Water Recovered (gallons): —

Water Column (feet): 13.99

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 9.09

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>							2.08	147	
0846			3	600.2	19.6	6.77			
			6	584.4	21.1	6.61			
	0850		9	598.8	21.4	6.52			
POST	PURGE						0.64	115	
Static at Time Sampled			Total Gallons Purged			Sample Time			
9.09			9			0855			
<b>Comments:</b>									

Well No. MW-6

Purge Method: Sub

Depth to Water (feet): 6.30

Depth to Product (feet): —

Total Depth (feet): 20.12

LPH & Water Recovered (gallons): —

Water Column (feet): 13.82

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 9.06

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>							1.07	154	
0906			3	576.5	19.7	6.66			
			6	580.3	20.3	6.53			
	0910		9	601.5	20.5	6.48			
POST	PURGE						0.46	118	
Static at Time Sampled			Total Gallons Purged			Sample Time			
9.06			9			0916			
<b>Comments:</b>									

## GROUNDWATER SAMPLING FIELD NOTES

Technician: A. Vidners

Site: 0843

Project No.: 165521

Date: 9/14/09

Well No. MW-8

Purge Method: Sub

Depth to Water (feet): 6.97

Depth to Product (feet):       

Total Depth (feet): 29.58

LPH & Water Recovered (gallons):       

Water Column (feet): 22.61

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 11.44

1 Well Volume (gallons): 4

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	DO (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>							1.11	151	
0944			4	973.2	20.5	6.69			
			8	1040	21.1	6.83			
	0949		12	1059	21.1	6.82			
POST	PURGE						0.28	92	
Static at Time Sampled			Total Gallons Purged			Sample Time			
7.43			12			1020			
<b>Comments:</b>									

Well No. ~~MW-9~~<sup>AV</sup> MW-7

Purge Method: Sub

Depth to Water (feet): 6.77

Depth to Product (feet):       

Total Depth (feet): 29.16

LPH & Water Recovered (gallons):       

Water Column (feet): 22.39

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 11.25

1 Well Volume (gallons): 4

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	DO (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>							1.35	-13	
1005			4	1016	21.0	6.91			
			8	989.9	21.3	6.71			
	1010		12	1006	21.8	6.69			
POST	PURGE						0.26	-53	
Static at Time Sampled			Total Gallons Purged			Sample Time			
7.57			10 <sup>AV</sup> 12			1034			
<b>Comments:</b>									

## GROUNDWATER SAMPLING FIELD NOTES

Technician: Ricky H.

Site: 0843

Project No: 165521

Date: 09/14/09

Well No. mw-1A2 <sup>PH</sup> ~~mw-1B2~~ Purge Method: Sub

Depth to Water (feet): 7.80 Depth to Product (feet): —

Total Depth (feet): 34.50 LPH & Water Recovered (gallons): —

Water Column (feet): 26.70 Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 13.14 1 Well Volume (gallons): 5

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, °C)	pH	DO (mg/L)	ORP	Turbidity
Pre-Purge							1.02	228	
0756			5	808.7	18.1	6.08			
			10	832.5	19.0	5.86			
	0803		15	813.8	19.0	5.67	0.46	143	
Static at Time Sampled			Total Gallons Purged			Sample Time			
9.00			15			0816			
Comments:									

Well No. mw-1A2

Purge Method: Sub

Depth to Water (feet): 7.83

Depth to Product (feet): —

Total Depth (feet): 29.80

LPH & Water Recovered (gallons): —

Water Column (feet): 21.97

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 12.22

1 Well Volume (gallons): 4

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, °C)	pH	DO (mg/L)	ORP	Turbidity
Pre-Purge							1.83	235	
0805			4	663.4	18.8	5.68			
			8	692.5	19.0	5.70			
	0811		12	697.7	19.0	5.70	1.68	187	
Static at Time Sampled			Total Gallons Purged			Sample Time			
8.10			12			0835			
Comments:									



## GROUNDWATER SAMPLING FIELD NOTES

Technician: Rocky H

Site: 0843

Project No.: 165521

Date: 08 09/14/09

Well No. mw-10

Purge Method: Sub

Depth to Water (feet): 7.50

Depth to Product (feet): —

Total Depth (feet): 29.23

LPH & Water Recovered (gallons): —

Water Column (feet): 21.73

Casing Diameter (Inches): 2'

80% Recharge Depth(feet): 11.85

1 Well Volume (gallons): 4

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, °C)	pH	DO (mg/L)	ORP	Turbidity
Pre-Purge							0.67	235	
0846			4	680.7	20.4	6.00			
			8	714.5	20.2	5.73			
	0852		12	721.6	20.0	5.63	2.19	114	
Static at Time Sampled			Total Gallons Purged			Sample Time			
11.50			12			0859			
Comments:									

Well No. mw-1

Purge Method: Sub

Depth to Water (feet): 7.60

Depth to Product (feet): —

Total Depth (feet): 19.85

LPH & Water Recovered (gallons): —

Water Column (feet): 12.25

Casing Diameter (Inches): 2'

80% Recharge Depth(feet): 10.05

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, °C)	pH	DO (mg/L)	ORP	Turbidity
Pre-Purge							3.81	233	
0912			3	295.4	19.9	6.16			
			6	351.1	19.7	5.83			
	0916		9	419.1	19.7	5.68	193	146	
Static at Time Sampled			Total Gallons Purged			Sample Time			
9.82			9			0922			
Comments:									

## GROUNDWATER SAMPLING FIELD NOTES

Technician: Ricky H

Site: 0843

Project No.: 16552

Date: 08 09/14/09

Well No. mw-9

Purge Method: Sub

Depth to Water (feet): 7.36

Depth to Product (feet): —

Total Depth (feet) 24.40

LPH & Water Recovered (gallons): —

Water Column (feet): 17.04

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 10.77

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, °C)	pH	DO (mg/L)	ORP	Turbidity
Pre-Purge							4.16	231	
0947			3	486.6	21.8	5.79			
			6	503.9	21.1	6.13			
	0951		9	540.3	21.1	6.17	3.58	171	
Static at Time Sampled			Total Gallons Purged			Sample Time			
8.50			9			1000			
Comments:									

Well No. mw. 11

Purge Method: Sub

Depth to Water (feet): 7.45

Depth to Product (feet): —

Total Depth (feet) 27.49

LPH & Water Recovered (gallons): —

Water Column (feet): 20.04

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 11.46

1 Well Volume (gallons): 4

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, °C)	pH	DO (mg/L)	ORP	Turbidity
Pre-Purge							0.82	224	
1015			4	861.3	21.8	6.00			
			8	864.6	21.1	5.80			
	1020		12	845.6	20.8	5.72	0.81	49	
Static at Time Sampled			Total Gallons Purged			Sample Time			
7.75			12			1027			
Comments:									



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949



Date of Report: 09/23/2009

Anju Farfan

TRC

21 Technology Drive  
Irvine, CA 92618

RE: 0843  
BC Work Order: 0912166  
Invoice ID: B068502

Enclosed are the results of analyses for samples received by the laboratory on 9/14/2009. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers  
Client Service Rep

Authorized Signature



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

**Reported:** 09/23/2009 15:27

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	Sampling Date:	Sample Depth:	Sample Matrix:	Metal Analysis:
0912166-01	COC Number:	---		09/14/2009 21:00	09/14/2009 10:20	---	Water	2-Lab Filtered and Acidified
	Project Number:	0843						
	Sampling Location:	---						
	Sampling Point:	MW-8						
	Sampled By:	TRCI						
0912166-02	COC Number:	---		09/14/2009 21:00	09/14/2009 10:34	---	Water	2-Lab Filtered and Acidified
	Project Number:	0843						
	Sampling Location:	---						
	Sampling Point:	MW-7						
	Sampled By:	TRCI						
0912166-03	COC Number:	---		09/14/2009 21:00	09/14/2009 08:16	---	Water	2-Lab Filtered and Acidified
	Project Number:	0843						
	Sampling Location:	---						
	Sampling Point:	MW-1BR						
	Sampled By:	TRCI						
0912166-04	COC Number:	---		09/14/2009 21:00	09/14/2009 08:35	---	Water	2-Lab Filtered and Acidified
	Project Number:	0843						
	Sampling Location:	---						
	Sampling Point:	MW-1AR						
	Sampled By:	TRCI						
0912166-05	COC Number:	---		09/14/2009 21:00	09/14/2009 08:59	---	Water	2-Lab Filtered and Acidified
	Project Number:	0843						
	Sampling Location:	---						
	Sampling Point:	MW-10						
	Sampled By:	TRCI						



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

**Reported:** 09/23/2009 15:27

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	Sampling Date:	Sample Depth:	Sample Matrix:	Metal Analysis:
0912166-06	<b>COC Number:</b>	---		09/14/2009 21:00	09/14/2009 09:22	---	Water	2-Lab Filtered and Acidified
	<b>Project Number:</b>	0843						
	<b>Sampling Location:</b>	---						
	<b>Sampling Point:</b>	MW-1						
	<b>Sampled By:</b>	TRCI						
0912166-07	<b>COC Number:</b>	---		09/14/2009 21:00	09/14/2009 10:00	---	Water	2-Lab Filtered and Acidified
	<b>Project Number:</b>	0843						
	<b>Sampling Location:</b>	---						
	<b>Sampling Point:</b>	MW-9						
	<b>Sampled By:</b>	TRCI						
0912166-08	<b>COC Number:</b>	---		09/14/2009 21:00	09/14/2009 10:27	---	Water	2-Lab Filtered and Acidified
	<b>Project Number:</b>	0843						
	<b>Sampling Location:</b>	---						
	<b>Sampling Point:</b>	MW-11						
	<b>Sampled By:</b>	TRCI						
0912166-09	<b>COC Number:</b>	---		09/14/2009 21:00	09/14/2009 08:11	---	Water	
	<b>Project Number:</b>	0843						
	<b>Sampling Location:</b>	---						
	<b>Sampling Point:</b>	MW-4						
	<b>Sampled By:</b>	TRCI						
0912166-10	<b>COC Number:</b>	---		09/14/2009 21:00	09/14/2009 08:33	---	Water	
	<b>Project Number:</b>	0843						
	<b>Sampling Location:</b>	---						
	<b>Sampling Point:</b>	MW-3						
	<b>Sampled By:</b>	TRCI						



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

**Reported:** 09/23/2009 15:27

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
0912166-11	<b>COC Number:</b>	---	<b>Receive Date:</b>	09/14/2009 21:00
	<b>Project Number:</b>	0843	<b>Sampling Date:</b>	09/14/2009 08:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MW-5	<b>Sample Matrix:</b>	Water
	<b>Sampled By:</b>	TRCI		
0912166-12	<b>COC Number:</b>	---	<b>Receive Date:</b>	09/14/2009 21:00
	<b>Project Number:</b>	0843	<b>Sampling Date:</b>	09/14/2009 09:16
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MW-6	<b>Sample Matrix:</b>	Water
	<b>Sampled By:</b>	TRCI		



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0912166-01		Client Sample Name:	0843, MW-8, 9/14/2009 10:20:00AM									
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836	ND	A01	
Ethylbenzene	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836	ND	A01	
<b>Methyl t-butyl ether</b>	<b>5600</b>	<b>ug/L</b>	<b>50</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 13:21</b>	<b>KEA</b>	<b>MS-V12</b>	<b>100</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Toluene	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836	ND	A01	
Total Xylenes	ND	ug/L	50	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836	ND	A01	
t-Amyl Methyl ether	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836	ND	A01	
t-Butyl alcohol	ND	ug/L	500	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836	ND	A01	
Diisopropyl ether	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836	ND	A01	
Ethanol	ND	ug/L	12000	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836	ND	A01	
Ethyl t-butyl ether	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836	ND	A01	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>3500</b>	<b>ug/L</b>	<b>2500</b>	<b>Luft-GC/MS</b>	<b>09/15/09</b>	<b>09/15/09 18:57</b>	<b>KEA</b>	<b>MS-V12</b>	<b>50</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01,A90</b>	
1,2-Dichloroethane-d4 (Surrogate)	99.5	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:21	KEA	MS-V12	100	BSI0836			
1,2-Dichloroethane-d4 (Surrogate)	98.9	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836			
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:21	KEA	MS-V12	100	BSI0836			
Toluene-d8 (Surrogate)	99.3	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836			
4-Bromofluorobenzene (Surrogate)	99.0	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:21	KEA	MS-V12	100	BSI0836			
4-Bromofluorobenzene (Surrogate)	99.5	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:57	KEA	MS-V12	50	BSI0836			



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Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

## Water Analysis (General Chemistry)

BCL Sample ID:	0912166-01		Client Sample Name:	0843, MW-8, 9/14/2009 10:20:00AM								
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Nitrate as NO3	7.7	mg/L	0.44	EPA-300.0	09/14/09	09/15/09 03:44	CRR	IC5	1	BSI0860	ND	
Sulfate	260	mg/L	1.0	EPA-300.0	09/14/09	09/15/09 03:44	CRR	IC5	1	BSI0860	ND	
Electrical Conductivity @ 25 C	1100	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 13:40	RML	MET-1	1	BSI0867		
Iron (II) Species	480	ug/L	100	SM-3500-F eD	09/15/09	09/15/09 05:30	MRM	SPEC05	1	BSI0870	ND	
Non-Volatile Organic Carbon	14	mg/L	1.5	EPA-415.1	09/16/09	09/17/09 09:17	CDR	TOC2	5	BSI1052	ND	A01
Dissolved Oxygen	6.2	mg O/L	0.50	SM-4500O G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05



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## Water Analysis (Metals)

BCL Sample ID:	0912166-01		Client Sample Name:	0843, MW-8, 9/14/2009 10:20:00AM								
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Hexavalent Chromium	ND	ug/L	2.0	EPA-7196	09/15/09	09/15/09 07:38	TDC	KONE-1	1	BSI0896	ND	
Manganese	1000	ug/L	1.0	EPA-200.8	09/15/09	09/21/09 13:22	JDC	PE-EL1	1	BSI1111	ND	
Total Chromium	60	ug/L	10	EPA-6010 B	09/17/09	09/17/09 14:44	ARD	PE-OP1	1	BSI1037	ND	
Total Recoverable Manganese	1300	ug/L	2.0	EPA-200.8	09/16/09	09/22/09 11:54	JDC	PE-EL1	2	BSI0963	ND	A01



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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0912166-02		Client Sample Name:	0843, MW-7, 9/14/2009 10:34:00AM									
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836	ND	A01	
Ethylbenzene	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836	ND	A01	
<b>Methyl t-butyl ether</b>	<b>15000</b>	<b>ug/L</b>	<b>100</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 13:03</b>	<b>KEA</b>	<b>MS-V12</b>	<b>200</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Toluene	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836	ND	A01	
Total Xylenes	ND	ug/L	50	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836	ND	A01	
t-Amyl Methyl ether	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836	ND	A01	
<b>t-Butyl alcohol</b>	<b>680</b>	<b>ug/L</b>	<b>500</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/15/09 18:39</b>	<b>KEA</b>	<b>MS-V12</b>	<b>50</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Diisopropyl ether	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836	ND	A01	
Ethanol	ND	ug/L	12000	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836	ND	A01	
Ethyl t-butyl ether	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836	ND	A01	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>7900</b>	<b>ug/L</b>	<b>2500</b>	<b>Luft-GC/M S</b>	<b>09/15/09</b>	<b>09/15/09 18:39</b>	<b>KEA</b>	<b>MS-V12</b>	<b>50</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01,A90</b>	
1,2-Dichloroethane-d4 (Surrogate)	98.7	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836			
1,2-Dichloroethane-d4 (Surrogate)	99.9	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:03	KEA	MS-V12	200	BSI0836			
Toluene-d8 (Surrogate)	99.8	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:03	KEA	MS-V12	200	BSI0836			
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836			
4-Bromofluorobenzene (Surrogate)	98.8	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:39	KEA	MS-V12	50	BSI0836			
4-Bromofluorobenzene (Surrogate)	99.6	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:03	KEA	MS-V12	200	BSI0836			



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### Water Analysis (General Chemistry)

BCL Sample ID: 0912166-02		Client Sample Name: 0843, MW-7, 9/14/2009 10:34:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Nitrate as NO3	4.2	mg/L	0.44	EPA-300.0	09/14/09	09/15/09 03:58	CRR	IC5	1	BSI0860	ND	
Sulfate	180	mg/L	1.0	EPA-300.0	09/14/09	09/15/09 03:58	CRR	IC5	1	BSI0860	ND	
Electrical Conductivity @ 25 C	1030	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 13:42	RML	MET-1	1	BSI0867		
Iron (II) Species	3200	ug/L	200	SM-3500-F eD	09/15/09	09/15/09 05:30	MRM	SPEC05	2	BSI0870	ND	A01
Non-Volatile Organic Carbon	9.8	mg/L	0.30	EPA-415.1	09/16/09	09/16/09 21:46	CDR	TOC2	1	BSI1052	ND	
Dissolved Oxygen	6.9	mg O/L	0.50	SM-4500O G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05



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## Water Analysis (Metals)

<b>BCL Sample ID:</b> 0912166-02		<b>Client Sample Name:</b> 0843, MW-7, 9/14/2009 10:34:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Hexavalent Chromium	ND	ug/L	2.0	EPA-7196	09/15/09	09/15/09 07:39	TDC	KONE-1	1	BSI0896	ND	
Manganese	2000	ug/L	5.0	EPA-200.8	09/15/09	09/22/09 10:44	JDC	PE-EL1	5	BSI1111	ND	A01
Total Chromium	76	ug/L	10	EPA-6010 B	09/17/09	09/17/09 14:46	ARD	PE-OP1	1	BSI1037	ND	
Total Recoverable Manganese	2200	ug/L	2.0	EPA-200.8	09/16/09	09/22/09 12:11	JDC	PE-EL1	2	BSI0963	ND	A01



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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0912166-03		Client Sample Name: 0843, MW-1BR, 9/14/2009 8:16:00AM											
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836	ND	A01	
Ethylbenzene	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836	ND	A01	
<b>Methyl t-butyl ether</b>	<b>680</b>	<b>ug/L</b>	<b>5.0</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/15/09 19:33</b>	<b>KEA</b>	<b>MS-V12</b>	<b>10</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Toluene	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836	ND	A01	
Total Xylenes	ND	ug/L	2.0	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836	ND	A01	
<b>t-Amyl Methyl ether</b>	<b>1.9</b>	<b>ug/L</b>	<b>1.0</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 15:49</b>	<b>KEA</b>	<b>MS-V12</b>	<b>2</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
<b>t-Butyl alcohol</b>	<b>33</b>	<b>ug/L</b>	<b>20</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 15:49</b>	<b>KEA</b>	<b>MS-V12</b>	<b>2</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Diisopropyl ether	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836	ND	A01	
Ethanol	ND	ug/L	500	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836	ND	A01	
Ethyl t-butyl ether	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836	ND	A01	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>450</b>	<b>ug/L</b>	<b>100</b>	<b>Luft-GC/MS</b>	<b>09/15/09</b>	<b>09/16/09 15:49</b>	<b>KEA</b>	<b>MS-V12</b>	<b>2</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01,A90</b>	
1,2-Dichloroethane-d4 (Surrogate)	97.9	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836			
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 19:33	KEA	MS-V12	10	BSI0836			
Toluene-d8 (Surrogate)	95.5	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 19:33	KEA	MS-V12	10	BSI0836			
Toluene-d8 (Surrogate)	97.3	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836			
4-Bromofluorobenzene (Surrogate)	97.9	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 15:49	KEA	MS-V12	2	BSI0836			
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 19:33	KEA	MS-V12	10	BSI0836			



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### Water Analysis (General Chemistry)

BCL Sample ID: 0912166-03		Client Sample Name: 0843, MW-1BR, 9/14/2009 8:16:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Nitrate as NO3	17	mg/L	0.44	EPA-300.0	09/14/09	09/15/09 04:13	CRR	IC5	1	BSI0860	ND	
Sulfate	59	mg/L	1.0	EPA-300.0	09/14/09	09/15/09 04:13	CRR	IC5	1	BSI0860	ND	
Electrical Conductivity @ 25 C	673	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 13:47	RML	MET-1	1	BSI0868		
Iron (II) Species	ND	ug/L	500	SM-3500-F eD	09/15/09	09/15/09 05:30	MRM	SPEC05	5	BSI0870	ND	A10
Non-Volatile Organic Carbon	3.7	mg/L	0.30	EPA-415.1	09/16/09	09/16/09 22:04	CDR	TOC2	1	BSI1052	ND	
Dissolved Oxygen	6.7	mg O/L	0.50	SM-4500O G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05



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### Water Analysis (Metals)

<b>BCL Sample ID:</b> 0912166-03		<b>Client Sample Name:</b> 0843, MW-1BR, 9/14/2009 8:16:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quas
Hexavalent Chromium	ND	ug/L	2.0	EPA-7196	09/14/09	09/14/09 23:56	CRR	KONE-1	1	BSI0853	ND	
Manganese	230	ug/L	1.0	EPA-200.8	09/15/09	09/21/09 13:34	JDC	PE-EL1	1	BSI1111	ND	
Total Chromium	250	ug/L	10	EPA-6010 B	09/17/09	09/17/09 14:48	ARD	PE-OP1	1	BSI1037	ND	
Total Recoverable Manganese	930	ug/L	1.0	EPA-200.8	09/16/09	09/22/09 12:14	JDC	PE-EL1	1	BSI0963	ND	



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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0912166-04												
Client Sample Name:	0843, MW-1AR, 9/14/2009 8:35:00AM												
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836	ND	A01	
Ethylbenzene	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836	ND	A01	
<b>Methyl t-butyl ether</b>	<b>890</b>	<b>ug/L</b>	<b>5.0</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/15/09 19:15</b>	<b>KEA</b>	<b>MS-V12</b>	<b>10</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Toluene	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836	ND	A01	
Total Xylenes	ND	ug/L	2.0	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836	ND	A01	
t-Amyl Methyl ether	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836	ND	A01	
<b>t-Butyl alcohol</b>	<b>110</b>	<b>ug/L</b>	<b>20</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 15:31</b>	<b>KEA</b>	<b>MS-V12</b>	<b>2</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Diisopropyl ether	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836	ND	A01	
Ethanol	ND	ug/L	500	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836	ND	A01	
Ethyl t-butyl ether	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836	ND	A01	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>480</b>	<b>ug/L</b>	<b>100</b>	<b>Luft-GC/MS</b>	<b>09/15/09</b>	<b>09/16/09 15:31</b>	<b>KEA</b>	<b>MS-V12</b>	<b>2</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01,A90</b>	
1,2-Dichloroethane-d4 (Surrogate)	96.0	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836			
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 19:15	KEA	MS-V12	10	BSI0836			
Toluene-d8 (Surrogate)	99.4	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 19:15	KEA	MS-V12	10	BSI0836			
Toluene-d8 (Surrogate)	95.9	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836			
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 15:31	KEA	MS-V12	2	BSI0836			
4-Bromofluorobenzene (Surrogate)	99.1	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 19:15	KEA	MS-V12	10	BSI0836			





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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

### Water Analysis (General Chemistry)

BCL Sample ID: 0912166-04		Client Sample Name: 0843, MW-1AR, 9/14/2009 8:35:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Nitrate as NO3	17	mg/L	0.44	EPA-300.0	09/14/09	09/15/09 04:27	CRR	IC5	1	BSI0860	ND	
Sulfate	39	mg/L	1.0	EPA-300.0	09/14/09	09/15/09 04:27	CRR	IC5	1	BSI0860	ND	
Electrical Conductivity @ 25 C	655	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 13:49	RML	MET-1	1	BSI0868		
Iron (II) Species	2500	ug/L	100	SM-3500-F eD	09/15/09	09/15/09 05:30	MRM	SPEC05	1	BSI0870	ND	
Non-Volatile Organic Carbon	4.5	mg/L	0.30	EPA-415.1	09/16/09	09/16/09 22:22	CDR	TOC2	1	BSI1052	ND	
Dissolved Oxygen	7.0	mg O/L	0.50	SM-4500OG	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05



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Project Number: 4511010865  
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### Water Analysis (Metals)

<b>BCL Sample ID:</b> 0912166-04		<b>Client Sample Name:</b> 0843, MW-1AR, 9/14/2009 8:35:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quas
Hexavalent Chromium	ND	ug/L	2.0	EPA-7196	09/14/09	09/14/09 23:56	CRR	KONE-1	1	BSI0853	ND	
Manganese	570	ug/L	1.0	EPA-200.8	09/15/09	09/21/09 13:36	JDC	PE-EL1	1	BSI1111	ND	
Total Chromium	170	ug/L	10	EPA-6010 B	09/17/09	09/17/09 14:50	ARD	PE-OP1	1	BSI1037	ND	
Total Recoverable Manganese	830	ug/L	1.0	EPA-200.8	09/16/09	09/22/09 12:27	JDC	PE-EL1	1	BSI0963	ND	



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## Volatile Organic Analysis (EPA Method 8260)

<b>BCL Sample ID:</b> 0912166-05	<b>Client Sample Name:</b> 0843, MW-10, 9/14/2009 8:59:00AM
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Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	6.2	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836	ND	A01
Ethylbenzene	ND	ug/L	6.2	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836	ND	A01
<b>Methyl t-butyl ether</b>	<b>4900</b>	<b>ug/L</b>	<b>25</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/15/09 18:21</b>	<b>KEA</b>	<b>MS-V12</b>	<b>50</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>
Toluene	ND	ug/L	6.2	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836	ND	A01
Total Xylenes	ND	ug/L	12	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836	ND	A01
t-Amyl Methyl ether	ND	ug/L	6.2	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836	ND	A01
<b>t-Butyl alcohol</b>	<b>240</b>	<b>ug/L</b>	<b>120</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 15:12</b>	<b>KEA</b>	<b>MS-V12</b>	<b>12.500</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>
Diisopropyl ether	ND	ug/L	6.2	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836	ND	A01
Ethanol	ND	ug/L	3100	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836	ND	A01
Ethyl t-butyl ether	ND	ug/L	6.2	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836	ND	A01
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>3300</b>	<b>ug/L</b>	<b>620</b>	<b>Luft-GC/MS</b>	<b>09/15/09</b>	<b>09/16/09 15:12</b>	<b>KEA</b>	<b>MS-V12</b>	<b>12.500</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01,A90</b>
1,2-Dichloroethane-d4 (Surrogate)	99.6	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:21	KEA	MS-V12	50	BSI0836		
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836		
Toluene-d8 (Surrogate)	97.1	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836		
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:21	KEA	MS-V12	50	BSI0836		
4-Bromofluorobenzene (Surrogate)	96.7	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:21	KEA	MS-V12	50	BSI0836		
4-Bromofluorobenzene (Surrogate)	99.0	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 15:12	KEA	MS-V12	12.500	BSI0836		



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## Water Analysis (General Chemistry)

BCL Sample ID: 0912166-05		Client Sample Name: 0843, MW-10, 9/14/2009 8:59:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Nitrate as NO3	6.3	mg/L	0.44	EPA-300.0	09/14/09	09/15/09 04:42	CRR	IC5	1	BSI0860	ND	
Sulfate	33	mg/L	1.0	EPA-300.0	09/14/09	09/15/09 04:42	CRR	IC5	1	BSI0860	ND	
Electrical Conductivity @ 25 C	675	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 13:50	RML	MET-1	1	BSI0868		
Iron (II) Species	210	ug/L	100	SM-3500-F eD	09/15/09	09/15/09 05:30	MRM	SPEC05	1	BSI0870	ND	
Non-Volatile Organic Carbon	2.7	mg/L	0.30	EPA-415.1	09/16/09	09/16/09 22:39	CDR	TOC2	1	BSI1052	ND	
Dissolved Oxygen	6.1	mg O/L	0.50	SM-4500O G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05



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Project Number: 4511010865  
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Reported: 09/23/2009 15:27

### Water Analysis (Metals)

<b>BCL Sample ID:</b> 0912166-05		<b>Client Sample Name:</b> 0843, MW-10, 9/14/2009 8:59:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Hexavalent Chromium	ND	ug/L	2.0	EPA-7196	09/15/09	09/15/09 07:39	TDC	KONE-1	1	BSI0896	ND	
Manganese	280	ug/L	1.0	EPA-200.8	09/15/09	09/21/09 13:39	JDC	PE-EL1	1	BSI1111	ND	
Total Chromium	24	ug/L	10	EPA-6010 B	09/17/09	09/17/09 14:52	ARD	PE-OP1	1	BSI1037	ND	
Total Recoverable Manganese	380	ug/L	1.0	EPA-200.8	09/16/09	09/22/09 12:30	JDC	PE-EL1	1	BSI0963	ND	



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Project Number: 4511010865  
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Reported: 09/23/2009 15:27

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0912166-06		Client Sample Name:	0843, MW-1, 9/14/2009 9:22:00AM									
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	ND	ug/L	5.0	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836	ND	A01	
Ethylbenzene	ND	ug/L	5.0	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836	ND	A01	
<b>Methyl t-butyl ether</b>	<b>2100</b>	<b>ug/L</b>	<b>25</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/15/09 18:02</b>	<b>KEA</b>	<b>MS-V12</b>	<b>50</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Toluene	ND	ug/L	5.0	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836	ND	A01	
Total Xylenes	ND	ug/L	10	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836	ND	A01	
t-Amyl Methyl ether	ND	ug/L	5.0	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836	ND	A01	
t-Butyl alcohol	ND	ug/L	100	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836	ND	A01	
Diisopropyl ether	ND	ug/L	5.0	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836	ND	A01	
Ethanol	ND	ug/L	2500	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836	ND	A01	
Ethyl t-butyl ether	ND	ug/L	5.0	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836	ND	A01	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>1700</b>	<b>ug/L</b>	<b>500</b>	<b>Luft-GC/MS</b>	<b>09/15/09</b>	<b>09/16/09 13:57</b>	<b>KEA</b>	<b>MS-V12</b>	<b>10</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01,A90</b>	
1,2-Dichloroethane-d4 (Surrogate)	94.3	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:02	KEA	MS-V12	50	BSI0836			
1,2-Dichloroethane-d4 (Surrogate)	98.7	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836			
Toluene-d8 (Surrogate)	96.3	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836			
Toluene-d8 (Surrogate)	97.2	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:02	KEA	MS-V12	50	BSI0836			
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 18:02	KEA	MS-V12	50	BSI0836			
4-Bromofluorobenzene (Surrogate)	98.0	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:57	KEA	MS-V12	10	BSI0836			



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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

### Water Analysis (General Chemistry)

BCL Sample ID: 0912166-06		Client Sample Name: 0843, MW-1, 9/14/2009 9:22:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Nitrate as NO3	11	mg/L	0.44	EPA-300.0	09/14/09	09/15/09 04:56	CRR	IC5	1	BSI0860	ND	
Sulfate	25	mg/L	1.0	EPA-300.0	09/14/09	09/15/09 04:56	CRR	IC5	1	BSI0860	ND	
Electrical Conductivity @ 25 C	429	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 13:51	RML	MET-1	1	BSI0868		
Iron (II) Species	ND	ug/L	100	SM-3500-F eD	09/15/09	09/15/09 05:30	MRM	SPEC05	1	BSI0870	ND	
Non-Volatile Organic Carbon	1.4	mg/L	0.30	EPA-415.1	09/16/09	09/16/09 22:57	CDR	TOC2	1	BSI1052	ND	
Dissolved Oxygen	6.8	mg O/L	0.50	SM-4500O G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05

TRC 21 Technology Drive Irvine, CA 92618	Project: 0843 Project Number: 4511010865 Project Manager: Anju Farfan	<b>Reported:</b> 09/23/2009 15:27
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## Water Analysis (Metals)

<b>BCL Sample ID:</b> 0912166-06	<b>Client Sample Name:</b> 0843, MW-1, 9/14/2009 9:22:00AM											
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Hexavalent Chromium	2.2	ug/L	2.0	EPA-7196	09/15/09	09/15/09 07:55	TDC	KONE-1	1	BSI0896	ND	
Manganese	3.7	ug/L	1.0	EPA-200.8	09/15/09	09/21/09 13:42	JDC	PE-EL1	1	BSI1111	ND	
Total Chromium	220	ug/L	10	EPA-6010 B	09/18/09	09/21/09 12:18	ARD	PE-OP1	1	BSI1100	ND	
Total Recoverable Manganese	1600	ug/L	2.0	EPA-200.8	09/16/09	09/22/09 12:33	JDC	PE-EL1	2	BSI0963	ND	A01





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Project Number: 4511010865  
Project Manager: Anju Farfan

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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0912166-07		Client Sample Name:	0843, MW-9, 9/14/2009 10:00:00AM								
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836	ND	
<b>Methyl t-butyl ether</b>	<b>390</b>	<b>ug/L</b>	<b>2.5</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 12:10</b>	<b>KEA</b>	<b>MS-V12</b>	<b>5</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>
Toluene	ND	ug/L	0.50	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836	ND	
<b>t-Butyl alcohol</b>	<b>24</b>	<b>ug/L</b>	<b>10</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 13:39</b>	<b>KEA</b>	<b>MS-V12</b>	<b>1</b>	<b>BSI0836</b>	<b>ND</b>	
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836	ND	
Ethanol	ND	ug/L	250	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836	ND	
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836	ND	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>280</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>09/15/09</b>	<b>09/16/09 13:39</b>	<b>KEA</b>	<b>MS-V12</b>	<b>1</b>	<b>BSI0836</b>	<b>ND</b>	<b>A90</b>
1,2-Dichloroethane-d4 (Surrogate)	106	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 12:10	KEA	MS-V12	5	BSI0836		
1,2-Dichloroethane-d4 (Surrogate)	95.2	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836		
Toluene-d8 (Surrogate)	97.8	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836		
Toluene-d8 (Surrogate)	94.6	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 12:10	KEA	MS-V12	5	BSI0836		
4-Bromofluorobenzene (Surrogate)	104	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 13:39	KEA	MS-V12	1	BSI0836		
4-Bromofluorobenzene (Surrogate)	93.9	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 12:10	KEA	MS-V12	5	BSI0836		



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Project: 0843  
Project Number: 4511010865  
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### Water Analysis (General Chemistry)

BCL Sample ID: 0912166-07		Client Sample Name: 0843, MW-9, 9/14/2009 10:00:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Nitrate as NO3	5.0	mg/L	0.44	EPA-300.0	09/14/09	09/15/09 05:10	CRR	IC5	1	BSI0860	ND	
Sulfate	68	mg/L	1.0	EPA-300.0	09/14/09	09/15/09 05:10	CRR	IC5	1	BSI0860	ND	
Electrical Conductivity @ 25 C	580	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 13:56	RML	MET-1	1	BSI0868		
Iron (II) Species	ND	ug/L	1000	SM-3500-F eD	09/15/09	09/15/09 05:30	MRM	SPEC05	10	BSI0870	ND	A10
Non-Volatile Organic Carbon	3.0	mg/L	0.30	EPA-415.1	09/16/09	09/16/09 23:14	CDR	TOC2	1	BSI1052	ND	
Dissolved Oxygen	7.3	mg O/L	0.50	SM-4500 O G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05



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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

### Water Analysis (Metals)

<b>BCL Sample ID:</b> 0912166-07		<b>Client Sample Name:</b> 0843, MW-9, 9/14/2009 10:00:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Hexavalent Chromium	ND	ug/L	2.0	EPA-7196	09/15/09	09/15/09 07:39	TDC	KONE-1	1	BSI0896	ND	
Manganese	180	ug/L	1.0	EPA-200.8	09/15/09	09/21/09 13:45	JDC	PE-EL1	1	BSI1111	ND	
Total Chromium	520	ug/L	10	EPA-6010 B	09/18/09	09/21/09 12:20	ARD	PE-OP1	1	BSI1100	ND	
Total Recoverable Manganese	4700	ug/L	5.0	EPA-200.8	09/16/09	09/22/09 12:36	JDC	PE-EL1	5	BSI0963	ND	A01



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Reported: 09/23/2009 15:27

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0912166-08		Client Sample Name:	0843, MW-11, 9/14/2009 10:27:00AM									
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836	ND	A01	
Ethylbenzene	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836	ND	A01	
<b>Methyl t-butyl ether</b>	<b>18000</b>	<b>ug/L</b>	<b>100</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 12:45</b>	<b>KEA</b>	<b>MS-V12</b>	<b>200</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Toluene	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836	ND	A01	
Total Xylenes	ND	ug/L	50	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836	ND	A01	
t-Amyl Methyl ether	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836	ND	A01	
<b>t-Butyl alcohol</b>	<b>850</b>	<b>ug/L</b>	<b>500</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/15/09 17:26</b>	<b>KEA</b>	<b>MS-V12</b>	<b>50</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>	
Diisopropyl ether	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836	ND	A01	
Ethanol	ND	ug/L	12000	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836	ND	A01	
Ethyl t-butyl ether	ND	ug/L	25	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836	ND	A01	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>11000</b>	<b>ug/L</b>	<b>2500</b>	<b>Luft-GC/MS</b>	<b>09/15/09</b>	<b>09/15/09 17:26</b>	<b>KEA</b>	<b>MS-V12</b>	<b>50</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01,A90</b>	
1,2-Dichloroethane-d4 (Surrogate)	99.6	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836			
1,2-Dichloroethane-d4 (Surrogate)	97.9	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 12:45	KEA	MS-V12	200	BSI0836			
Toluene-d8 (Surrogate)	97.1	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836			
Toluene-d8 (Surrogate)	99.4	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 12:45	KEA	MS-V12	200	BSI0836			
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 12:45	KEA	MS-V12	200	BSI0836			
4-Bromofluorobenzene (Surrogate)	98.9	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 17:26	KEA	MS-V12	50	BSI0836			



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Irvine, CA 92618

Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

### Water Analysis (General Chemistry)

BCL Sample ID: 0912166-08		Client Sample Name: 0843, MW-11, 9/14/2009 10:27:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Nitrate as NO3	0.73	mg/L	0.44	EPA-300.0	09/14/09	09/15/09 05:25	CRR	IC5	1	BSI0860	ND	
Sulfate	37	mg/L	1.0	EPA-300.0	09/14/09	09/15/09 05:25	CRR	IC5	1	BSI0860	ND	
Electrical Conductivity @ 25 C	780	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 13:57	RML	MET-1	1	BSI0868		
Iron (II) Species	310	ug/L	100	SM-3500-F eD	09/15/09	09/15/09 05:30	MRM	SPEC05	1	BSI0870	ND	
Non-Volatile Organic Carbon	3.3	mg/L	0.30	EPA-415.1	09/16/09	09/16/09 23:31	CDR	TOC2	1	BSI1052	ND	
Dissolved Oxygen	6.7	mg O/L	0.50	SM-4500O G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05



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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

### Water Analysis (Metals)

<b>BCL Sample ID:</b> 0912166-08		<b>Client Sample Name:</b> 0843, MW-11, 9/14/2009 10:27:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quas
Hexavalent Chromium	ND	ug/L	2.0	EPA-7196	09/15/09	09/15/09 07:41	TDC	KONE-1	1	BSI0896	ND	
Manganese	570	ug/L	1.0	EPA-200.8	09/15/09	09/21/09 13:48	JDC	PE-EL1	1	BSI1111	ND	
Total Chromium	14	ug/L	10	EPA-6010 B	09/18/09	09/21/09 12:22	ARD	PE-OP1	1	BSI1100	ND	
Total Recoverable Manganese	740	ug/L	1.0	EPA-200.8	09/16/09	09/22/09 12:39	JDC	PE-EL1	1	BSI0963	ND	



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Project Number: 4511010865  
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Reported: 09/23/2009 15:27

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0912166-09		Client Sample Name:	0843, MW-4, 9/14/2009 8:11:00AM								
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
Toluene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
Ethanol	ND	ug/L	250	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836	ND	
1,2-Dichloroethane-d4 (Surrogate)	94.4	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836		
Toluene-d8 (Surrogate)	96.0	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836		
4-Bromofluorobenzene (Surrogate)	102	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 20:45	KEA	MS-V12	1	BSI0836		

TRC 21 Technology Drive Irvine, CA 92618	Project: 0843 Project Number: 4511010865 Project Manager: Anju Farfan	<b>Reported:</b> 09/23/2009 15:27
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## Water Analysis (General Chemistry)

BCL Sample ID:	0912166-09	Client Sample Name:	0843, MW-4, 9/14/2009 8:11:00AM									
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Electrical Conductivity @ 25 C	1020	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 13:59	RML	MET-1	1	BSI0868		
Dissolved Oxygen	7.1	mg O/L	0.50	SM-4500G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05





TRC  
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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0912166-10		Client Sample Name: 0843, MW-3, 9/14/2009 8:33:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
Toluene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
Ethanol	ND	ug/L	250	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836	ND	
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836		
Toluene-d8 (Surrogate)	94.1	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836		
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 20:27	KEA	MS-V12	1	BSI0836		

TRC 21 Technology Drive Irvine, CA 92618	Project: 0843 Project Number: 4511010865 Project Manager: Anju Farfan	<b>Reported:</b> 09/23/2009 15:27
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## Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 0912166-10	<b>Client Sample Name:</b> 0843, MW-3, 9/14/2009 8:33:00AM											
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Electrical Conductivity @ 25 C	658	umhos/cm	1.00	EPA-120.1	09/16/09	09/16/09 10:45	RML	MET-1	1	BSI0950		
Dissolved Oxygen	6.6	mg O/L	0.50	SM-4500G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0899		S05



TRC  
21 Technology Drive  
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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0912166-11		Client Sample Name: 0843, MW-5, 9/14/2009 8:55:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
Toluene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
Ethanol	ND	ug/L	250	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/M S	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836	ND	
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836		
Toluene-d8 (Surrogate)	93.5	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836		
4-Bromofluorobenzene (Surrogate)	99.5	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 20:10	KEA	MS-V12	1	BSI0836		



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Project: 0843  
Project Number: 4511010865  
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Reported: 09/23/2009 15:27

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 0912166-11		<b>Client Sample Name:</b> 0843, MW-5, 9/14/2009 8:55:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Electrical Conductivity @ 25 C	609	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 14:00	RML	MET-1	1	BSI0868		
Dissolved Oxygen	4.0	mg O/L	0.50	SM-4500G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0901		S05



TRC  
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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0912166-12		Client Sample Name:	0843, MW-6, 9/14/2009 9:16:00AM								
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836	ND	
<b>Methyl t-butyl ether</b>	<b>310</b>	<b>ug/L</b>	<b>2.5</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/16/09 12:27</b>	<b>KEA</b>	<b>MS-V12</b>	<b>5</b>	<b>BSI0836</b>	<b>ND</b>	<b>A01</b>
Toluene	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836	ND	
<b>t-Butyl alcohol</b>	<b>23</b>	<b>ug/L</b>	<b>10</b>	<b>EPA-8260</b>	<b>09/15/09</b>	<b>09/15/09 19:51</b>	<b>KEA</b>	<b>MS-V12</b>	<b>1</b>	<b>BSI0836</b>	<b>ND</b>	
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836	ND	
Ethanol	ND	ug/L	250	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836	ND	
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836	ND	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>230</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>09/15/09</b>	<b>09/15/09 19:51</b>	<b>KEA</b>	<b>MS-V12</b>	<b>1</b>	<b>BSI0836</b>	<b>ND</b>	<b>A90</b>
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 12:27	KEA	MS-V12	5	BSI0836		
1,2-Dichloroethane-d4 (Surrogate)	99.9	%	76 - 114 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836		
Toluene-d8 (Surrogate)	96.2	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836		
Toluene-d8 (Surrogate)	98.0	%	88 - 110 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 12:27	KEA	MS-V12	5	BSI0836		
4-Bromofluorobenzene (Surrogate)	103	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/16/09 12:27	KEA	MS-V12	5	BSI0836		
4-Bromofluorobenzene (Surrogate)	104	%	86 - 115 (LCL - UCL)	EPA-8260	09/15/09	09/15/09 19:51	KEA	MS-V12	1	BSI0836		

TRC 21 Technology Drive Irvine, CA 92618	Project: 0843 Project Number: 4511010865 Project Manager: Anju Farfan	<b>Reported:</b> 09/23/2009 15:27
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## Water Analysis (General Chemistry)

BCL Sample ID:	0912166-12	Client Sample Name:	0843, MW-6, 9/14/2009 9:16:00AM									
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Electrical Conductivity @ 25 C	595	umhos/cm	1.00	EPA-120.1	09/15/09	09/15/09 14:02	RML	MET-1	1	BSI0868		
Dissolved Oxygen	7.1	mg O/L	0.50	SM-4500G	09/15/09	09/15/09 07:30	HPR	MANUAL	1	BSI0901		S05



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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Benzene	BSI0836	Matrix Spike	0911528-36	0	20.650	25.000	ug/L		82.6		70 - 130	
		Matrix Spike Duplicate	0911528-36	0	24.920	25.000	ug/L	18.7	99.7	20	70 - 130	
Toluene	BSI0836	Matrix Spike	0911528-36	0	19.650	25.000	ug/L		78.6		70 - 130	
		Matrix Spike Duplicate	0911528-36	0	23.660	25.000	ug/L	18.5	94.6	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BSI0836	Matrix Spike	0911528-36	ND	9.2600	10.000	ug/L		92.6		76 - 114	
		Matrix Spike Duplicate	0911528-36	ND	9.4400	10.000	ug/L		94.4		76 - 114	
Toluene-d8 (Surrogate)	BSI0836	Matrix Spike	0911528-36	ND	10.100	10.000	ug/L		101		88 - 110	
		Matrix Spike Duplicate	0911528-36	ND	9.8200	10.000	ug/L		98.2		88 - 110	
4-Bromofluorobenzene (Surrogate)	BSI0836	Matrix Spike	0911528-36	ND	10.290	10.000	ug/L		103		86 - 115	
		Matrix Spike Duplicate	0911528-36	ND	9.9900	10.000	ug/L		99.9		86 - 115	



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery Lab Quals
Nitrate as NO3	BSI0860	Duplicate	0912149-01	24.157	24.192		mg/L	0.1		10	
		Matrix Spike	0912149-01	24.157	48.225	22.358	mg/L		108		80 - 120
		Matrix Spike Duplicate	0912149-01	24.157	48.064	22.358	mg/L	0.7	107	10	80 - 120
Sulfate	BSI0860	Duplicate	0912149-01	100.71	100.95		mg/L	0.2		10	
		Matrix Spike	0912149-01	100.71	212.24	101.01	mg/L		110		80 - 120
		Matrix Spike Duplicate	0912149-01	100.71	212.38	101.01	mg/L	0.1	111	10	80 - 120
Electrical Conductivity @ 25 C	BSI0868	Duplicate	0911596-02RE1	1970.0	1939.0		umhos/cm	1.6		10	
Iron (II) Species	BSI0870	Duplicate	0912166-01	481.10	481.10		ug/L	0		10	
Dissolved Oxygen	BSI0899	Duplicate	0912166-01	6.2000	6.2000		mg O/L	0		10	
Dissolved Oxygen	BSI0901	Duplicate	0912166-11	4.0000	4.0000		mg O/L	0		10	
Electrical Conductivity @ 25 C	BSI0950	Duplicate	0912154-01	637.40	646.20		umhos/cm	1.4		10	
Non-Volatile Organic Carbon	BSI1052	Duplicate	0912166-01	14.005	14.305		mg/L	2.1		10	
		Matrix Spike	0912166-01	14.005	41.407	25.126	mg/L		109		80 - 120
		Matrix Spike Duplicate	0912166-01	14.005	41.477	25.126	mg/L	0.3	109	10	80 - 120





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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

### Water Analysis (Metals)

#### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery Lab Quals
Hexavalent Chromium	BSI0853	Duplicate	0912156-01	0.061000	ND		ug/L			10	
		Matrix Spike	0912156-01	0.061000	42.093	52.632	ug/L		79.9		85 - 115 Q03
		Matrix Spike Duplicate	0912156-01	0.061000	40.596	52.632	ug/L	3.6	77.0	10	85 - 115 Q03
Hexavalent Chromium	BSI0896	Duplicate	0912166-01	0.31700	ND		ug/L			10	
		Matrix Spike	0912166-01	0.31700	51.401	52.632	ug/L		97.1		85 - 115
		Matrix Spike Duplicate	0912166-01	0.31700	51.049	52.632	ug/L	0.7	96.4	10	85 - 115
Total Recoverable Manganese	BSI0963	Duplicate	0912166-01	1271.0	1338.1		ug/L	5.2		20	
		Matrix Spike	0912166-01	1271.0	1434.8	100.00	ug/L		164		70 - 130 A03
		Matrix Spike Duplicate	0912166-01	1271.0	1363.2	100.00	ug/L	55.9	92.2	20	70 - 130 A03,Q02
Total Chromium	BSI1037	Duplicate	0912224-01	-0.0029879	ND		ug/L			20	
		Matrix Spike	0912224-01	-0.0029879	205.36	200.00	ug/L		103		75 - 125
		Matrix Spike Duplicate	0912224-01	-0.0029879	203.62	200.00	ug/L	0.9	102	20	75 - 125
Total Chromium	BSI1100	Duplicate	0912278-01	2.6318	ND		ug/L			20	
		Matrix Spike	0912278-01	2.6318	224.10	200.00	ug/L		111		75 - 125
		Matrix Spike Duplicate	0912278-01	2.6318	217.97	200.00	ug/L	2.8	108	20	75 - 125
Manganese	BSI1111	Duplicate	0912279-01	7.2840	7.1780		ug/L	1.5		20	
		Matrix Spike	0912279-01	7.2840	116.05	102.04	ug/L		107		70 - 130
		Matrix Spike Duplicate	0912279-01	7.2840	118.04	102.04	ug/L	1.8	109	20	70 - 130



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Reported: 09/23/2009 15:27

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BSI0836	BSI0836-BS1	LCS	27.510	25.000	0.50	ug/L	110		70 - 130		
Toluene	BSI0836	BSI0836-BS1	LCS	25.290	25.000	0.50	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BSI0836	BSI0836-BS1	LCS	9.5700	10.000		ug/L	95.7		76 - 114		
Toluene-d8 (Surrogate)	BSI0836	BSI0836-BS1	LCS	9.9600	10.000		ug/L	99.6		88 - 110		
4-Bromofluorobenzene (Surrogate)	BSI0836	BSI0836-BS1	LCS	10.130	10.000		ug/L	101		86 - 115		



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## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Nitrate as NO3	BSI0860	BSI0860-BS1	LCS	22.568	22.134	0.44	mg/L	102		90 - 110		
Sulfate	BSI0860	BSI0860-BS1	LCS	103.79	100.00	1.0	mg/L	104		90 - 110		
Electrical Conductivity @ 25 C	BSI0867	BSI0867-BS1	LCS	316.10	303.00	1.00	umhos/cm	104		90 - 110		
Electrical Conductivity @ 25 C	BSI0868	BSI0868-BS1	LCS	318.90	303.00	1.00	umhos/cm	105		90 - 110		
Iron (II) Species	BSI0870	BSI0870-BS1	LCS	2028.1	2000.0	100	ug/L	101		90 - 110		
Electrical Conductivity @ 25 C	BSI0950	BSI0950-BS1	LCS	318.90	303.00	1.00	umhos/cm	105		90 - 110		
Non-Volatile Organic Carbon	BSI1052	BSI1052-BS1	LCS	5.0710	5.0000	0.30	mg/L	101		85 - 115		

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## Water Analysis (Metals)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Hexavalent Chromium	BSI0853	BSI0853-BS1	LCS	48.735	50.000	2.0	ug/L	97.5		85 - 115		
Hexavalent Chromium	BSI0896	BSI0896-BS1	LCS	48.702	50.000	2.0	ug/L	97.4		85 - 115		
Total Recoverable Manganese	BSI0963	BSI0963-BS1	LCS	114.26	100.00	1.0	ug/L	114		85 - 115		
Total Chromium	BSI1037	BSI1037-BS1	LCS	206.54	200.00	10	ug/L	103		85 - 115		
Total Chromium	BSI1100	BSI1100-BS1	LCS	204.38	200.00	10	ug/L	102		85 - 115		
Manganese	BSI1111	BSI1111-BS1	LCS	106.55	100.00	1.0	ug/L	107		85 - 115		



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## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BSI0836	BSI0836-BLK1	ND	ug/L	0.50		
Ethylbenzene	BSI0836	BSI0836-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BSI0836	BSI0836-BLK1	ND	ug/L	0.50		
Toluene	BSI0836	BSI0836-BLK1	ND	ug/L	0.50		
Total Xylenes	BSI0836	BSI0836-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BSI0836	BSI0836-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BSI0836	BSI0836-BLK1	ND	ug/L	10		
Diisopropyl ether	BSI0836	BSI0836-BLK1	ND	ug/L	0.50		
Ethanol	BSI0836	BSI0836-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BSI0836	BSI0836-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BSI0836	BSI0836-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BSI0836	BSI0836-BLK1	104	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BSI0836	BSI0836-BLK1	99.6	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BSI0836	BSI0836-BLK1	99.9	%	86 - 115 (LCL - UCL)		



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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

Reported: 09/23/2009 15:27

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Nitrate as NO3	BSI0860	BSI0860-BLK1	ND	mg/L	0.44		
Sulfate	BSI0860	BSI0860-BLK1	ND	mg/L	1.0		
Iron (II) Species	BSI0870	BSI0870-BLK1	ND	ug/L	100		
Non-Volatile Organic Carbon	BSI1052	BSI1052-BLK1	ND	mg/L	0.30		



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Project: 0843  
Project Number: 4511010865  
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## Water Analysis (Metals)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Hexavalent Chromium	BSI0853	BSI0853-BLK1	ND	ug/L	2.0		
Hexavalent Chromium	BSI0896	BSI0896-BLK1	ND	ug/L	2.0		
Total Recoverable Manganese	BSI0963	BSI0963-BLK1	ND	ug/L	1.0		
Total Chromium	BSI1037	BSI1037-BLK1	ND	ug/L	10		
Total Chromium	BSI1100	BSI1100-BLK1	ND	ug/L	10		
Manganese	BSI1111	BSI1111-BLK1	ND	ug/L	1.0		



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Project: 0843  
Project Number: 4511010865  
Project Manager: Anju Farfan

**Reported:** 09/23/2009 15:27

### Notes And Definitions

MDL Method Detection Limit

ND Analyte Not Detected at or above the reporting limit

PQL Practical Quantitation Limit

RPD Relative Percent Difference

A01 PQL's and MDL's are raised due to sample dilution.

A03 The sample concentration is more than 4 times the spike level.

A10 PQL's and MDL's were raised due to matrix interference.

A90 TPPH does not exhibit a "gasoline" pattern. TPPH is entirely due to MTBE.

Q02 Matrix spike precision is not within the control limits.

Q03 Matrix spike recovery(s) is(are) not within the control limits.

S05 The sample holding time was exceeded.

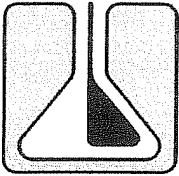


September 17, 2009

TRC  
21 Technology Drive  
Irvine, CA 92618  
Attn: Anju Farfan  
RE: 09-12166

Attached are the results from Zalco Laboratories, Inc.

<u>BCL Sample ID</u>	<u>Client Sample ID</u>	<u>Sample Date/Time</u>
09-12166-01	MW-8	09/14/09@10:20
09-12166-02	MW-7	09/14/09@10:34
09-12166-03	MW-1BR	09/14/09@08:16
09-12166-04	MW1AR	09/14/09@08:35
09-12166-05	MW-10	09/14/09@08:59
09-12166-06	MW-1	09/14/09@09:22
09-12166-07	MW-9	09/14/09@10:00
09-12166-08	MW-11	09/14/09@10:27
09-12166-09	MW-4	09/14/09@08:11
09-12166-10	MW-3	09/14/09@08:33
09-12166-11	MW-5	09/14/09@08:55
09-12166-12	MW-6	09/14/09@09:16



ZALCO LABORATORIES, INC.  
Analytical & Consulting Services

4309 Armour Avenue  
Bakersfield, California 93308

(661) 395-0539  
FAX (661) 395-3069

Wednesday, September 16, 2009

Molly Meyers  
BC Laboratories Inc  
4100 Atlas Court  
Bakersfield, CA 93308

TEL: (661) 327-4911  
FAX (661) 327-1918

RE: 0912166

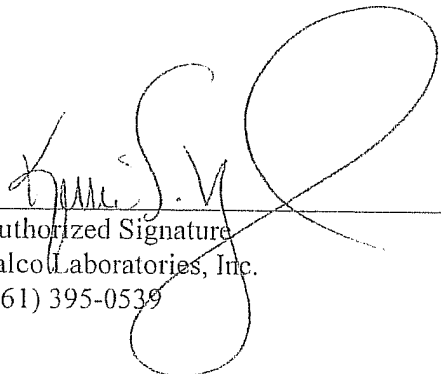
Order No.: 0909170

Dear Molly Meyers:

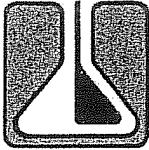
Zalco Laboratories, Inc. received 12 sample(s) on 9/15/2009 for the analyses presented in the following report.

We appreciate your business and look forward to serving you in the future. Please feel free to call our office if you have any questions regarding these test results.

Sincerely,



Authorized Signature  
Zalco Laboratories, Inc.  
(661) 395-0539



**ZALCO LABORATORIES, INC.**

Analytical and Consulting Services

4309 Armour Avenue  
Bakersfield, California 93308

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**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-01  
**Report Comment:**

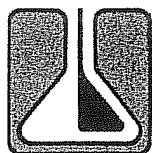
**Report Date:** 9/16/2009  
**Lab ID:** 0909170-001A  
**Collection Date:** 9/14/2009 10:20:00 AM  
**Matrix:** AQUEOUS

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	407	mv	9/15/2009	

**Qualifiers /  
Abbreviations:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount



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**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-02  
**Report Comment:**

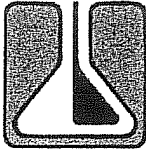
**Report Date:** 9/16/2009  
**Lab ID:** 0909170-002A  
**Collection Date:** 9/14/2009 10:34:00 AM  
**Matrix:** AQUEOUS

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	217	mv	9/15/2009	

**Qualifiers /  
Abbreviations:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount



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**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-03  
**Report Comment:**

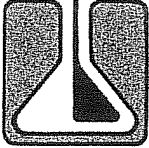
**Report Date:** 9/16/2009  
**Lab ID:** 0909170-003A  
**Collection Date:** 9/14/2009 8:16:00 AM  
**Matrix:** AQUEOUS

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	207	mv	9/15/2009	

**Qualifiers /  
Abbreviations:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount



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**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-04

**Report Date:** 9/16/2009  
**Lab ID:** 0909170-004A  
**Collection Date:** 9/14/2009 8:35:00 AM  
**Matrix:** AQUEOUS

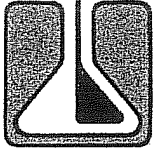
**Report Comment:**

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	205	mv	9/15/2009	

**Qualifiers /  
Abbreviations:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount



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**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-05

**Report Date:** 9/16/2009  
**Lab ID:** 0909170-005A  
**Collection Date:** 9/14/2009 8:59:00 AM  
**Matrix:** AQUEOUS

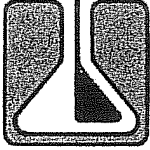
**Report Comment:**

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	205	mv	9/15/2009	

**Qualifiers /  
Abbreviations:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount



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Bakersfield, California 93308

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FAX (661) 395-3069

**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-06

**Report Date:** 9/16/2009  
**Lab ID:** 0909170-006A  
**Collection Date:** 9/14/2009 9:22:00 AM  
**Matrix:** AQUEOUS

**Report Comment:**

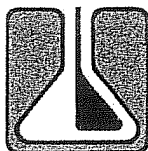
Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	204	mv	9/15/2009	

**Qualifiers /  
Abbreviations:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount





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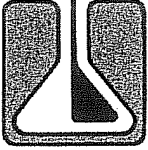
**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-07  
**Report Comment:**

**Report Date:** 9/16/2009  
**Lab ID:** 0909170-007A  
**Collection Date:** 9/14/2009 10:00:00 AM  
**Matrix:** AQUEOUS

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	204	mv	9/15/2009	

**Qualifiers / Abbreviations:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount



**ZALCO LABORATORIES, INC.**  
 Analytical and Consulting Services  
 4309 Armour Avenue  
 Bakersfield, California 93308

(661) 395-0539  
 FAX (661) 395-3069

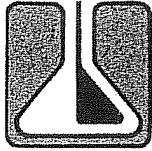
**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-08  
**Report Comment:**

**Report Date:** 9/16/2009  
**Lab ID:** 0909170-008A  
**Collection Date:** 9/14/2009 10:27:00 AM  
**Matrix:** AQUEOUS

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	192	mv	9/15/2009	

**Qualifiers / Abbreviations:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level  
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Bakersfield, California 93308

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**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-09

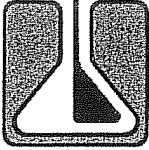
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**Lab ID:** 0909170-009A  
**Collection Date:** 9/14/2009 8:11:00 AM  
**Matrix:** AQUEOUS

**Report Comment:**

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	195	mv	9/15/2009	

**Qualifiers /**  
**Abbreviations:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount



**ZALCO LABORATORIES, INC.**  
 Analytical and Consulting Services  
 4309 Armour Avenue  
 Bakersfield, California 93308

(661) 395-0539  
 FAX (661) 395-3069

**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-10

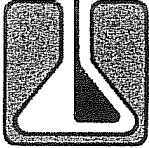
**Report Date:** 9/16/2009  
**Lab ID:** 0909170-010A  
**Collection Date:** 9/14/2009 8:33:00 AM  
**Matrix:** AQUEOUS

**Report Comment:**

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	196	mv	9/15/2009	

**Qualifiers / Abbreviations:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level  
 H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 DLR: Detection Limit for Reporting  
 NSS - Non-Sufficient Sample Amount



**ZALCO LABORATORIES, INC.**

Analytical and Consulting Services

4309 Armour Avenue  
Bakersfield, California 93308

(661) 395-0539  
FAX (661) 395-3069

**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-11

**Report Date:** 9/16/2009  
**Lab ID:** 0909170-011A  
**Collection Date:** 9/14/2009 8:33:00 AM  
**Matrix:** AQUEOUS

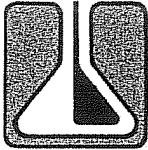
**Report Comment:**

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	204	mv	9/15/2009	

**Qualifiers /  
Abbreviations:**

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time Exceeded

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount



**ZALCO LABORATORIES, INC.**

Analytical and Consulting Services

4309 Armour Avenue  
Bakersfield, California 93308

(661) 395-0539  
FAX (661) 395-3069

**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0909170  
**Project:** 0912166  
**Client Sample ID:** 0912166-12  
**Report Comment:**

**Report Date:** 9/16/2009  
**Lab ID:** 0909170-012A  
**Collection Date:** 9/14/2009 9:16:00 AM  
**Matrix:** AQUEOUS

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>OXIDATION REDUCTION POTENTIAL BY ASTM D1498</b>					
Oxidation Reduction Potential	D1498	205	mv	9/15/2009	

**Qualifiers / Abbreviations:**

ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level	DLR: Detection Limit for Reporting
H - Hold Time Exceeded	NSS - Non-Sufficient Sample Amount

Submission #: 09-12166

SHIPPING INFORMATION

Federal Express  UPS  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER

Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

Intact? Yes  No

Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: .98 Container: ptee Thermometer ID: #80

Date/Time 9/14/09 2055

Temperature: A 1.0 °C / C 1.2 °C

Analyst Init CAM

SAMPLE CONTAINERS

SAMPLE NUMBERS

	1	2	3	4	5	6	7	8	9	10
GENERAL MINERAL/ GENERAL PHYSICAL										
PE UNPRESERVED	BC	BC	B	B	B	B				
INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS	D	D								
<del>CYANIDE</del> Ferrous Irons	E	E								
NITROGEN FORMS										
TOTAL SULFIDE										
oz. NITRATE / NITRITE										
TOTAL ORGANIC CARBON	FG									
TOX										
CHEMICAL OXYGEN DEMAND										
A PHENOLICS										
0ml VOA VIAL TRAVEL BLANK										
0ml VOA VIAL	A.3	A.3	A.3	A.3	A.3	A.3	( )	( )	( )	( )
EPA 413.1, 413.2, 418.1										
ODOR										
RADIOLOGICAL										
ACTERIOLOGICAL										
0 ml VOA VIAL- 504										
EPA 508/608/8080										
EPA 515.1/8150										
EPA 525										
EPA 525 TRAVEL BLANK										
00ml EPA 547										
00ml EPA 531.1										
EPA 548										
EPA 549										
EPA 632										
EPA 8015M										
AMBER	H		C	C	C	C				
1 OZ. JAR										
2 OZ. JAR										
SOIL SLEEVE										
CB VIAL										
LASTIC BAG										
FEROUS IRON										
ENCORE										

Comments: Sample Numbering Completed By: CAM

Date/Time: 9/14/09 2110

= Actual / C = Corrected

Submission #: 091-12166

SHIPPING INFORMATION

Federal Express  UPS  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER

Ice Chest  None   
 Box  Other  (Specify) \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals Ice Chest  Containers  None  Comments:

Intact? Yes  No

Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received

YES  NO

Emissivity: 98 Container: plastic Thermometer ID: #80

Temperature: A 1.2 °C / C 1.4 °C

Date/Time 9/14/09 2055

Analyst Init CRM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED			BC		C					
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS					D	D				
PT <sup>CANNISTER</sup> CYANIDE <del>Fe</del> <u>Ferrous Iron</u>			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON			FG	FG	FG	FG	FG	FG	FG	
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL			A	BA	BA	BA	BA	BA	BA	
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER			H							
3 OZ. JAR										
3/2 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: CRM Date/Time: 9/14/09 2110  
 = Actual / C = Corrected



Submission #: 09-1246

SHIPPING INFORMATION

Federal Express  UPS  Hand Delivery  BC Lab Field Service  Other  (Specify)

SHIPPING CONTAINER

Ice Chest  None  Box  Other  (Specify)

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals Ice Chest  Containers  None  Comments: Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received YES  NO

Emissivity: .98 Container: Free Thermometer ID: #80 Temperature: A 1.2 °C / C 1.4 °C

Date/Time 9/14/09 2055 Analyst Init CAM

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various test types like QT GENERAL MINERAL, PT PE UNPRESERVED, etc. with handwritten sample numbers like B, BC, D, E, H.

Comments: Sample Numbering Completed By: CAM Date/Time: 9/14/09 2110

A = Actual / C = Corrected

SHORT HOLDING TIME  
 Cr<sup>6+</sup> NO<sub>2</sub> NO<sub>3</sub> OP SS  
 DO Cl<sub>2</sub> BOD MBAS COT

CHK BY *JW* DISTRIBUTION  
 SUB-OUT

BC LABORATORIES, INC.

09-12/66  
 4100 Atlas Court  
 (661) 327-4911

Bakersfield, CA 93308  
 FAX (661) 327-1918

CHAIN OF CUSTODY

Analysis Requested

Bill to: Conoco Phillips/ TRC	Consultant Firm: TRC	MATRIX (GW) Ground-water (S) Soil (WW) Waste-water (SL) Sludge BTEX/MTBE by 8021B, Gas by 8015 <del>total chrome by 6010</del> <del>total iron by 3500FE+D</del> Ferrous Iron by SM 18 3500FE+D 8260 full list w/ oxygenates BTEX/MTBE/OXYS BY 8260B ETHANOL by 8260B TPH -G by GC/MS/EDC/EDD by 8260B Specific Conductance by EPA 120.1 DO by EPA SM 4500-O ORP by ASTM D1948/sulfate by 300.0 Nitrate by 300.0/Chrome VI 6010 dissolved manganese by 200.8/ total manganese by 200.8/Toc by 45.1 Turnaround Time Requested
Address: 1629 Webster St.	21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan	
City: Alameda	4-digit site#: 0843	
State: CA Zip:	Workorder #: 02807-4511010865	
Conoco Phillips Mgr: Terry Grayson	Project #: 165521	
Sampler Name: Ricky H.		

Lab#	Sample Description	Field Point Name	Date & Time Sampled	MATRIX	BTEX/MTBE	8260	BTEX/MTBE/OXYS	ETHANOL	TPH	DO	ORP	Nitrate	dissolved manganese	total manganese	Turnaround Time Requested
1		mw-8	09/14/09 1020	GW	X	X	X	X	X	X	X	X	X	X	7 DAY
2		mw-7	1034												
3		mw-1BR	0816												
4		mw-1AR	0835												
5		mw-10	0959												
6		mw-1	0922												
7		mw-9	1000												
8		mw-11	1027												

Comments:  GLOBAL ID: T0600102263	Relinquished by: (Signature) <i>[Signature]</i>	Received by: <i>Ricky H.</i>	Date & Time 9/14/09 1340
	Relinquished by: (Signature) <i>Ricky H. 9/14/09</i>	Received by: <i>[Signature]</i>	Date & Time 9-14-09 1620
	Relinquished by: (Signature) <i>Ricky H. 9-14-09 2100</i>	Received by: <i>[Signature]</i>	Date & Time 9-14-09 2100

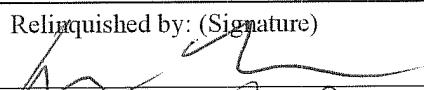
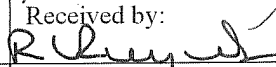
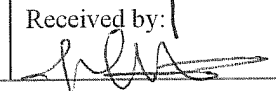
**BC LABORATORIES, INC.**

4100 Atlas Court Bakersfield, CA 93308  
 (661) 327-4911 FAX (661) 327-1918

**CHAIN OF CUSTODY**

**Analysis Requested**

Bill to: Conoco Phillips/ TRC		Consultant Firm: TRC		MATRIX (GW) Ground-water (S) Soil (WW) Waste-water (SL) Sludge	BTEX/MTBE by 8021B, Gas by 8015 TPH GAS by 8015M TPH DIESEL by 8015 8260 full list w/ oxygenates BTEX/MTBE/OXYS BY 8260B ETHANOL by 8260B TPH -G by GC/MS, EDB/EDC by 8260B Specific conductance by EPA 170.1 DO by EPA SM 4500-0 ORP by ASTM D1148 Turnaround Time Requested
Address: 1629 Webster St.		21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan			
City: Alameda		4-digit site#: 0843			
State: CA Zip:		Workorder # 02807-4511010865			
Conoco Phillips Mgr: Terry Grayson		Project #: 165521			
Sampler Name: Andrew Vidners					
Lab#	Sample Description	Field Point Name	Date & Time Sampled		
- 9		MW-4	9/14/09 0811	GW	X
- 10		MW-3	↓ 0833	↓	↓
- 11		MW-5	↓ 0855	↓	↓
- 12		MW-6	↓ 0916	↓	↓

Comments:  GLOBAL ID: T0600102263	Relinquished by: (Signature) 	Received by: Ross Dickey	Date & Time 9/14/09 1340
	Relinquished by: (Signature) Ross Dickey 9/14/09	Received by: 	Date & Time 9-14-09 1620
	Relinquished by: (Signature) Ross Dickey 9-14-09 2100	Received by: 	Date & Time 9-14-09 2100

**Receipt of Manifest  
is Pending**

**(September 28, 2009)**



## **Limitations**

The fluid level monitoring and groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.