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**SUBJECT: Perjury Statement**

To Whom It May Concern:

I declare, under penalty of perjury, that the information and/or recommendations contained in the requested attached reports in your letter dated August 8, 2011 are true and correct to the best of my knowledge.

Signed:   
JANE A. ALLEN

November 28, 2008

**GROUNDWATER MONITORING REPORT  
Second and Third Quarter, 2008**

325 Martin Luther King Jr. Way  
Oakland, California

Project No. 270308

Prepared For

Jane and Kimball Allen  
2 Lone Tree Avenue  
Mill Valley, CA 94941

Prepared By

**AEI Consultants**  
2500 Camino Diablo, Suite 200  
Walnut Creek, CA 94597  
(925) 283-6000

**AEI**



2500 Camino Diablo, Walnut Creek, CA 94597  
tel 800-801-3224  
fax 925-944-2895

ENVIRONMENTAL & ENGINEERING SERVICES

[www.aeiconsultants.com](http://www.aeiconsultants.com)

November 28, 2008

Jane and Kimball Allen  
2 Lone Tree Avenue  
Mill Valley, California 94941

**Subject: Quarterly Groundwater Monitoring Report  
Second and Third Quarter, 2008**  
325 Martin Luther King Jr. Way  
Oakland, California  
AEI Project No. 270308

Dear Mr. and Mrs. Allen:

AEI Consultants (AEI) has prepared this report on behalf of Jane and Kimball Allen to document the ongoing groundwater investigation at the above referenced site (Figure 1, Site Location Map). The groundwater investigation is being performed in accordance with the requirements of the Alameda County Health Care Services Agency (ACHCSA). The purpose of these activities is to monitor groundwater quality in the vicinity of the identified release of fuel products at the site. This report presents the findings of Second and Third Quarter 2008 episodes of groundwater monitoring and sampling conducted on June 18 and September 19, 2008. In addition, this report includes the findings of sampling well MW-3 on August 4 and 20, 2008, as part of performance monitoring for the chemical oxidation pilot test performed in late July 2008.

## **I Background**

The subject property is located on the western corner of the intersection of Martin Luther King Jr. Way and 4<sup>th</sup> Street in a mixed commercial and industrial area of Oakland. The property measures approximately 100 feet along Martin Luther King and approximately 150 feet along 4<sup>th</sup> Street with the property building covering essentially 100% of the land area. The northwestern portion of the building along 4<sup>th</sup> Street has also had the address 671 4<sup>th</sup> Street. The building is currently vacant, but was previously occupied by Pucci Enterprises as warehouse space and cold storage freezers.

Touchstone Developments completed a Phase I Environmental Site Assessment (ESA) of the property dated November 1, 1993 and identified a 10,000-gallon former fuel UST that currently exists below the north side of the building. The fuel UST was used to provide fuel for the Pucci Enterprises truck fleet. Marvin Busby Company, Inc. decommissioned the tank on October 20, 1993 by steam cleaning the tank, pumping remaining sludge out of the tank, and filling the tank with concrete slurry. At the time of the UST closure, the

eastern section of the building had not yet been built. The tank could not be removed because of its proximity to the footing of the 671 4<sup>th</sup> Street building. After tank closure, the eastern portion of the building (325 Martin Luther King) was constructed. Although records show that the UST was abandoned following proper procedures applicable at that time, no documentation was available of sampling around the tank prior to abandonment. A number of site investigations were performed by several environmental consultants during 2005 and 2006.

AEI performed a Phase II Subsurface Investigation in May 2005. A total two borings (SB-2 and SB-4) were completed with soil and groundwater samples collected (SB-1 and SB-3 encountered refusal at 4 feet bgs, possibly the top of the concrete filled UST). A release was discovered during the investigation, which indicated an impact to groundwater. Total petroleum hydrocarbon (TPH) as gasoline (TPH-g), TPH as diesel (TPH-d), and benzene were detected in groundwater up to 780 micrograms per liter ( $\mu\text{g/L}$ ), 420  $\mu\text{g/L}$ , and 53  $\mu\text{g/L}$ , respectively.

In September 2005, an additional investigation was performed by Terra Firma. Groundwater samples were reportedly collected from four (4) soil borings (labeled 50901-1 to 50901-4). Details on the methods, field observations (including soil conditions), or analytical reports were not made available to AEI. Based on the information provided, groundwater sample analyses revealed the highest concentrations of TPH-g, TPH-d, and benzene at 20,000  $\mu\text{g/l}$ , 3600  $\mu\text{g/l}$ , and 990  $\mu\text{g/l}$ , from the two borings to the south of the UST. Two borings southwest of the UST contained lower, but still detectable, concentrations fuel contaminants.

In June 2006, Ceres Associated performed another subsurface investigation. The project included the analyses of soil and groundwater from an additional five soil borings (labeled SB-5 to SB-9). Significant concentrations of fuel contaminants were detected in both soil and groundwater, particularly in SB-7, located southeast of the UST. Logs of the borings were not made available to AEI.

A fourth consultant, LRM Consulting, prepared release notification documentation and a workplan for the ACHCSA in August 2006. The workplan included additional research into possible additional source locations (dispenser, piping, offsite releases, etc) and the installation of three (3) monitoring wells. The wells were proposed as 2" PVC wells with a screen interval of approximately 5 to 20 feet bgs.

The ACHCSA had several comments relating to the previous assessments, following which AEI was retained to prepare a comprehensive workplan. The workplan, titled *Site Characterization Workplan*, prepared in March of 2007, detailed soil boring investigation and well installation activities to effectively characterize the release.

In May of 2007, AEI performed a soil and groundwater investigation by advancing an additional twelve (12) soil borings at the property. The soil boring locations were chosen to help determine the magnitude and extent of the petroleum release. Low to moderate

concentrations of petroleum hydrocarbons were detected in the soil adjacent to the abandoned UST and in groundwater. Contaminant distributions in groundwater suggested that the release of hydrocarbons is limited in extent; confined to the 325 Martin Luther King Jr. Way unit. On August 10, 2007, AEI installed three (3) groundwater monitoring wells in the area of the release. Elevated petroleum hydrocarbons were detected in well MW-3, adjacent to the abandoned UST, during the initial monitoring event. Please refer to AEI's *Monitoring Well Installation Report*, dated September 21, 2008, for the well construction details and a comprehensive history of the subject site.

As requested by the ACHCSA, a *Corrective Action Pilot Test Workplan* was prepared for the site, in a report dated April 7, 2008, for a pilot-scale evaluation of in-situ chemical oxidation as a potential method of remediating the site. The workplan proposed five injection points in the immediate area of source well MW-3, targeting the saturated zone as well as the lower vadose zone using the product RegenOx™ manufactured by Regenesys, Inc. The workplan was approved by the ACHCSA in a letter dated May 13, 2008. On July 17 and 18, 2008, 720 lbs of RegenOx™ was injected in five locations (IP-1 through IP-5) at spacing approximately five feet away from well MW-3. Please refer to AEI's *Corrective Action Pilot Test Workplan*, dated April 7, 2008, for more details regarding the pilot test.

## **II Summary of Monitoring Activities**

AEI measured the depth to groundwater in the three (3) monitoring wells (labeled MW-1 through MW-3) on June 18 and September 19, 2008. Depth to groundwater was also measured in well MW-3 on August 4 and August 20, 2008, as part of pilot test performance monitoring. The well locations are shown on Figure 3. The depth to static groundwater from the top of the well casings was measured with an electric water level indicator prior to sampling.

The wells were purged with a battery-powered submersible pump. Temperature, pH, specific conductivity, dissolved oxygen (DO), and the oxidation-reduction potential (ORP) were measured and the turbidity was visually noted during purging of the wells. At least three (3) well volumes of water were purged from each well. The wells were allowed to recharge to at least 90% of their original level prior to sample collection.

Groundwater samples were collected with new disposable plastic bailers into 40 ml volatile organic analysis (VOA) vials and 1-liter amber bottles. VOAs were capped so that no head space or air bubbles were visible within the sample containers. Samples were transported on ice under proper chain of custody protocol to McCampbell Analytical, Inc. of Pittsburgh, California (Department of Health Services Certification #1644).

For the 2<sup>nd</sup> quarter 2008 sampling event, three (3) samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g); methyl tertiary-butyl ether (MTBE), benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA methods 8021B/8015Cm; total petroleum hydrocarbons as diesel (TPH-d) by EPA method 8015C; and MTBE, 1,2-Dibromoethane (EDB), and 1,2-dichloroethane (1,2-DCA) by EPA Method 8260B. As part of pilot test evaluation monitoring, the three samples were additionally analyzed for the dissolved metals arsenic, barium, cadmium, total chromium, copper, total iron, lead, and selenium by EPA method E2008.8 and hexavalent chromium by EPA method E218.6.

For the performance monitoring events of MW-3 conducted on August 4 and 20, 2008, one groundwater sample was analyzed for the constituents specified above.

For the 3<sup>rd</sup> quarter 2008 sampling event, three (3) samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g); methyl tertiary-butyl ether (MTBE), benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA methods 8021B/8015Cm; total petroleum hydrocarbons as diesel (TPH-d) by EPA method 8015C; and MTBE, 1,2-Dibromoethane (EDB), and 1,2-dichloroethane (1,2-DCA) by EPA Method 8260B. One sample (MW-3) was analyzed for the metals arsenic, barium, cadmium, total chromium, copper, total iron, lead, and selenium by EPA method E2008.8, as well as hexavalent chromium by EPA method E218.6.

### **III Field Results**

Groundwater levels for the 2<sup>nd</sup> quarter 2008 monitoring episode ranged from 6.45 (MW-2) to 6.58 (MW-3) feet above mean sea level (amsl). Groundwater levels for the 3<sup>rd</sup> quarter 2008 monitoring episode ranged from 6.35 (MW-2) to 6.58 (MW-3) feet above mean sea level (amsl). The groundwater elevations for the 2<sup>nd</sup> quarter were an average of 0.46 feet lower than the previous episode, while the groundwater elevations for the 3<sup>rd</sup> quarter were an average of 0.12 feet lower than the previous episode. Based on these measurements, groundwater flows in a south-southeasterly direction at a gradient of approximately 0.004 ft/ft for the 2<sup>nd</sup> Quarter, while the 3<sup>rd</sup> Quarter exhibited a southerly flow direction and a gradient of approximately 0.003 ft/ft. Both of these flow directions and hydraulic gradients are consistent with previous episodes.

Groundwater elevation data, flow direction, and hydraulic gradient are summarized in Table 2: Groundwater Elevation Data. The water table elevations and the estimated groundwater flow direction are presented on Figures 3 and 4: Water Table Elevations. Please refer to Appendix A for the Groundwater Monitoring Well Field Sampling Forms, which include water quality data and other parameters collected during well purging.

## IV Groundwater Quality

### 2<sup>nd</sup> Quarter 2008

No detectable concentrations of petroleum hydrocarbons were reported in the groundwater samples collected from monitoring wells MW-1 and MW-2, with the exception of MTBE and 1,2-DCA detected in MW-1 at concentrations of 15 µg/L and 5.4 µg/L, respectively. In MW-3, TPH-g was detected at 20,000 µg/L and TPH-d at 3,000 µg/L. BTEX concentrations in MW-3 were detected at 2,900 µg/L, 1,100 µg/L, 390 µg/L, and 990 µg/L, respectively. In addition, EDB and 1,2-DCA were detected in well MW-3 at concentrations of 21 µg/L and 190 µg/L, respectively.

Dissolved arsenic was detected in MW-1 through MW-3 at concentrations of 0.83 µg/L, 0.90 µg/L, and 9.9 µg/L, respectively. Dissolved barium was detected in the same three wells ranging in concentration from 16 µg/L (MW-2) to 26 µg/L (MW-3). Dissolved total chromium was detected in MW-1 and MW-2 at 3.9 µg/L and 5.8 µg/L, respectively. Dissolved hexavalent chromium was detected in MW-1 and MW-2 at concentrations of 2.9 µg/L and 4.6 µg/L, respectively. Dissolved total iron was detected in MW-2 and MW-3 at concentrations of 56 µg/L and 3,700 µg/L, respectively. Dissolved lead was detected in MW-1 and MW-3 at 0.70 µg/L and 4.3 µg/L, respectively. No other selected dissolved metals were detected exceeding laboratory reporting limits.

### Performance Monitoring (MW-3)

On August 4, 2008, TPH-g, TPH-d, and BTEX were detected in MW-3 at concentrations of 110,000 µg/L, 27,000 µg/L, 5,900 µg/L, 9,000 µg/L, 76 µg/L, and 8,100 µg/L. EDB and 1,2-DCA were detected at 220 µg/L and 410 µg/L, respectively. Dissolved arsenic, barium, copper, lead, and selenium were detected at 75 µg/L, 64 µg/L, 45 µg/L, 30 µg/L, and 14 µg/L. Dissolved total chromium and hexavalent chromium were detected at 120 µg/L and 130 µg/L, respectively. On August 20, 2008, TPH-g, TPH-d, and BTEX were detected in MW-3 at concentrations of 120,000 µg/L, 6,500 µg/L, 8,900 µg/L, 18,000 µg/L, 730 µg/L, and 12,000 µg/L. EDB and 1,2-DCA were detected at 330 µg/L and 410 µg/L, respectively. Dissolved arsenic, barium, copper, total iron, lead, and selenium were detected at 77 µg/L, 42 µg/L, 21 µg/L, 260 µg/L, 34 µg/L, and 9.6 µg/L. Dissolved total chromium and hexavalent chromium were detected at 73 µg/L and 54 µg/L, respectively.

### 3<sup>rd</sup> Quarter 2008

No detectable concentrations of petroleum hydrocarbons were reported in the groundwater samples collected from monitoring wells MW-1 and MW-2, with the exception of MTBE and 1,2-DCA detected in MW-1 at concentrations of 4.2 µg/L and 6.8 µg/L, respectively. In MW-3, TPH-g was detected at 64,000 µg/L and TPH-d at 4,500 µg/L. BTEX concentrations in MW-3 were detected at 6,200 µg/L, 9,200 µg/L, 660 µg/L, and 6,600 µg/L, respectively. In addition, EDB and 1,2-DCA were detected in well MW-3 at concentrations of 160 µg/L and 320 µg/L, respectively.

Dissolved arsenic was detected in MW-3 at a concentration of 62 µg/L. Dissolved total chromium was detected in MW-3 at 13 µg/L while dissolved hexavalent chromium was detected at 5.0 µg/L. Dissolved copper, total iron, lead, and selenium were detected in the same well at 19 µg/L, 390 µg/L, 28 µg/L, and 5.8 µg/L, respectively. Barium and cadmium were not detected exceeding laboratory reporting limits.

A summary of groundwater analytical data is presented in Tables 3 to 5 and select data is illustrated on Figures 5 and 6. Laboratory analytical reports and chain of custody documentation are included in Appendix B.

## **V Summary**

This report documents the findings of the 2<sup>nd</sup> and 3<sup>rd</sup> Quarter 2008 regular groundwater monitoring events at the site and monthly pilot test monitoring. The analytical data gathered from the 2<sup>nd</sup> Quarter event was approximately one month prior to July injections and considered baseline. Analytical data gathered from the August 4 and 20, 2008 event for MW-3, as well as the 3<sup>rd</sup> Quarterly event, suggest that a considerable amount of desorbing of petroleum occurred in the vicinity of MW-3 from the 2-day injections event, which resulted in higher petroleum hydrocarbon groundwater concentrations in MW-3. However, based on 3<sup>rd</sup> Quarter analytical data, these spikes in hydrocarbons observed after the injections appear to be subsiding. In addition, several metals were also oxidized after the injections; although, most of these metals appear to have decreased significantly. Dissolved oxygen levels in MW-3 have also remained well above pre-injection levels in this well.

Based on sample analytical data gathered to date, it is apparent that the injections were sufficient to liberate sorbed contamination but were not enough to degrade, or chemically oxidize, the liberated contamination. Discussions with Regenesys technical staff has indicated that the site conditions may require a higher dosing amount than initially calculated. Regenesys has suggested injecting three times the mass initially injected, or roughly 2,150 lbs. An encouraging aspect of the injections is that dissolved oxygen in MW-3 increased significantly following the injections. Additional RegenOx™ injections in the area of MW-3 were discussed with and approved by Mr. Jerry Wickham of the ACHCSA during a telephone conversation in mid-November.

The next groundwater monitoring event is tentatively scheduled for the 4<sup>th</sup> Quarter 2008, in mid-December of 2008. It is expected that additional injections at the site will take place in either December of 2008 or January of 2009.

## **VI Report Limitations**

This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work.

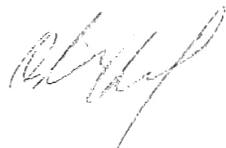


The number and location of samples are chosen to provide the requested information, but it cannot be assumed that they are representative of areas not sampled. All conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.


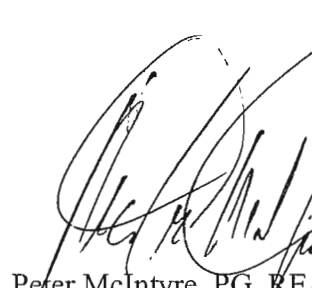
These services were performed in accordance with generally accepted practices, in the environmental engineering field, which existed at the time and location of the work.

If you have any questions regarding our investigation, please do not hesitate to contact either of the undersigned at (925) 283-6000.

Sincerely,  
**AEI Consultants**



Adrian M. Angel  
Project Geologist



Peter McIntyre, PG, REA  
Senior Project Manager

## Figures

- Figure 1: Site Location Map*
- Figure 2: Site Plan*
- Figure 3: Water Table Elevations (6/18/08)*
- Figure 4: Water Table Elevations (9/19/08)*
- Figure 5: Dissolved Phase Hydrocarbon Concentrations (6/18/08)*
- Figure 6: Dissolved Phase Hydrocarbon Concentrations (9/19/08)*

## Tables

- Table 1: Monitoring Well Construction Details*
- Table 2: Groundwater Elevation Data*
- Table 3: Groundwater Monitoring Sample Analytical Data*
- Table 4: Groundwater Monitoring Sample Analytical Data – Fuel Additives*
- Table 4: Groundwater Monitoring Sample Analytical Data – Metals*

**Appendix A:** *Groundwater Monitoring Well Field Sampling Forms*

**Appendix B:** *Laboratory Analyses With Chain of Custody Documentation*

## **Previous Documentation**

- AEI Consultants, *Phase II Subsurface Investigation Report*, May 18, 2005
- AEI Consultants, *Site Characterization Workplan*, March 8, 2007
- AEI Consultants, *Soil and Groundwater Investigation Report*, September 21, 2007
- AEI Consultants, *Corrective Action Pilot Test Workplan*, April 7, 2008
- Alameda County Health Care Services Agency, *Fuel Leak Case No. RO0002930, 325 Martin Luther King Jr. Way, Oakland, CA 94607*, December 22, 2006
- Alameda County Health Care Services Agency, *Fuel Leak Case No. RO0002930, 325 Martin Luther King Jr. Way, Oakland, CA 94607*, May 13, 2008
- Ceres Associates, *Soil and Groundwater Investigation Report*, June 8, 2006
- Helley, E.J., et al, *Quaternary Geology of Alameda County and Surrounding Areas, California*, 1997
- LRM Consulting, Inc., *Notice of Unauthorized Release and Supplemental Investigation Workplan*, August 29, 2006
- Norfleet Consultants, *Groundwater Study and Water Supply History of the East Bay Plain, Alameda and Contra Costa Counties, CA*, June 19, 1998
- Terra Firma, *Findings of Environmental Subsurface Investigation*, September 16, 2005
- Touchstone Developments, *Phase I Investigation*, November 1, 1993

### Distribution:

Jane and Kimball Allen (2 hard copies)  
2 Lone Tree Way  
Mill Valley, CA 94549

Alameda County Environmental Health Services (ACEHS) (electronic)  
Attn: Mr. Jerry Wickham  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

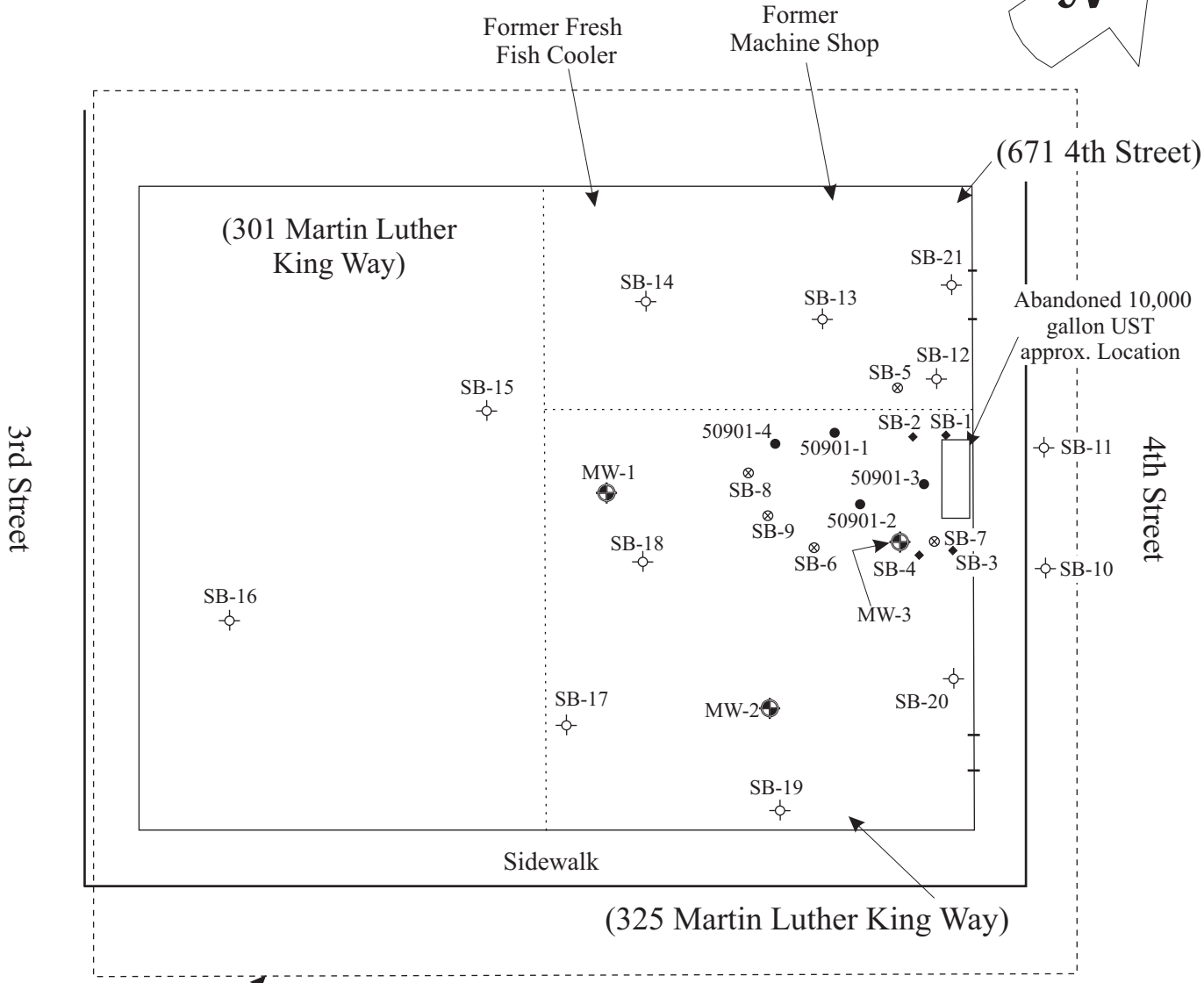
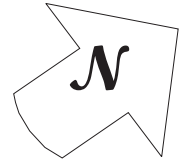
GeoTracker (electronic)

# FIGURES

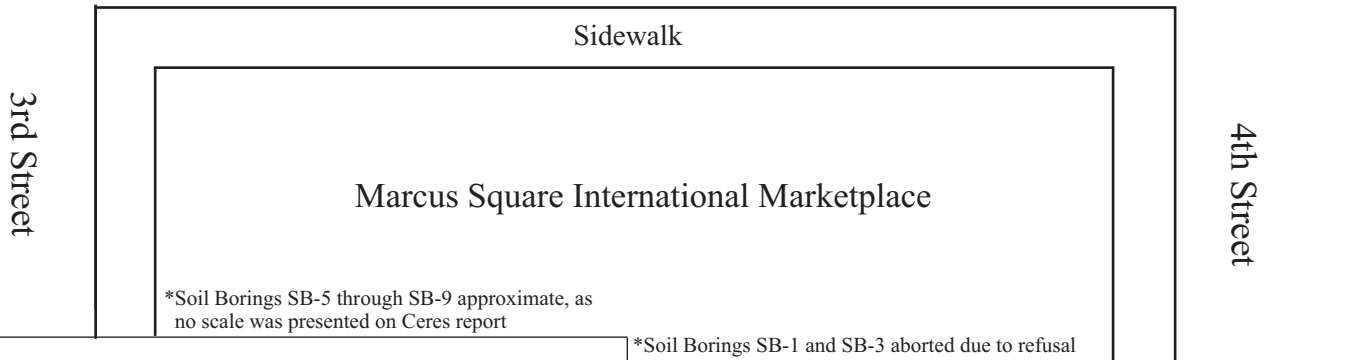


0' 20' 40'

Scale: 1" = 40'



Inset for Figures 3 through 4



\*Soil Borings SB-5 through SB-9 approximate, as no scale was presented on Ceres report

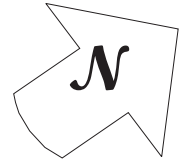
\*Soil Borings SB-1 and SB-3 aborted due to refusal

- ..... Designates Unit Boundary
- ◆ Soil Boring Location (AEI - 5/11/05)
- Soil Boring Location (TFC - 9/8/05)
- ⊗ Soil Boring Location (Ceres - 6/6/06)
- ⊕ Soil Boring Location (AEI - 5/29-30/07)
- ⊕ Monitoring Well Location (8/21/07)

<p><b>AEI CONSULTANTS</b> 2500 CAMINO DIABLO, SUITE 200 WALNUT CREEK, CA</p>	
<p><b>Site Plan</b></p>	
<p>325 Martin Luther King Jr. Way Oakland, California</p>	<p><b>FIGURE 2</b> PROJECT No. 270308</p>

0' 15' 30'

Scale: 1" = 30'



Adjacent Commercial Unit

(671 4th Street)

(301 Martin Luther King Way)

Abandoned 10,000 gallon UST approx. Location

Sidewalk

Sidewalk

Groundwater Flow Direction  
(Gradient = 0.004)  
06/18/2008

MW-1  
(6.51)

MW-3  
(6.64)

6.65

6.55

MW-2  
(6.45)

6.45

Roll-up Door

Sidewalk

(325 Martin Luther King Way)



Monitoring Well Locations

MW-2 (6.49) Water table elevations shown in parentheses in feet ams (above mean sea level)

— Contour Interval = 1.0 feet

**AEI CONSULTANTS**  
2500 CAMINO DIABLO, SUITE 200 WALNUT CREEK, CA

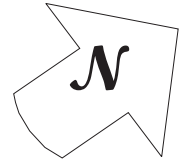
**Water Table Elevations (6/18/08)**

325 Martin Luther King Jr. Way  
Oakland, California

**FIGURE 3**  
PROJECT No. 270308

0' 15' 30'

Scale: 1" = 30'



Adjacent Commercial Unit

(671 4th Street)

(301 Martin Luther King Way)

Abandoned 10,000 gallon UST approx. Location

Sidewalk

Sidewalk

Groundwater Flow Direction  
(Gradient = 0.003)  
09/19/2008

6.35  
MW-1  
(6.36)

6.45

6.55

MW-3  
(6.52)

MW-2  
(6.35)

Roll-up Door

Sidewalk

(325 Martin Luther King Way)



Monitoring Well Locations

MW-2 (6.49) Water table elevations shown in parentheses in feet ams (above mean sea level)

Contour Interval = 1.0 feet

**AEI CONSULTANTS**  
2500 CAMINO DIABLO, SUITE 200 WALNUT CREEK, CA

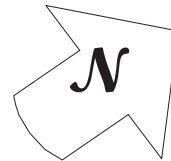
**Water Table Elevations (9/19/08)**

325 Martin Luther King Jr. Way  
Oakland, California

**FIGURE 4**  
PROJECT No. 270308

0' 15' 30'

Scale: 1" = 30'



Adjacent Commercial Unit

(671 4th Street)

(301 Martin Luther King Way)

Abandoned 10,000 gallon UST approx. Location

Sidewalk

Sidewalk

MW-1

G - <50  
D - <50  
B - <0.5  
M - 15

MW-3

G - 20,000  
D - 3,000  
B - 2,900  
M - <17

MW-2

G - <50  
D - <50  
B - <0.5  
M - <5.0

Roll-up Door

Sidewalk

(325 Martin Luther King Way)



Monitoring Well Locations

Hydrocarbon concentrations expressed in ug/L  
(Refer to Tables 3 & 4 for details)

G = total petroleum hydrocarbons as gasoline  
D = total petroleum hydrocarbons as diesel  
B = benzene  
M = methyl tertiary butyl ether (MTBE)

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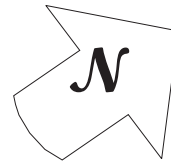
**Dissolved Phase Hydrocarbon  
Concentrations (6/18/08)**

325 Martin Luther King Jr. Way  
Oakland, California

**FIGURE 5**  
PROJECT No. 270308

0' 15' 30'

Scale: 1" = 30'



Adjacent Commercial Unit

(671 4th Street)

(301 Martin Luther King Way)

Abandoned 10,000 gallon UST approx. Location

Sidewalk

Sidewalk

MW-1

G - <50  
D - <50  
B - <0.5  
M - 4.5

MW-3

G - 64,000  
D - 4,500  
B - 6,200  
M - <17

MW-2

G - <50  
D - <50  
B - <0.5  
M - <5.0

Roll-up Door

Sidewalk

(325 Martin Luther King Way)



Monitoring Well Locations

Hydrocarbon concentrations expressed in ug/L  
(Refer to Tables 3 & 4 for details)

G = total petroleum hydrocarbons as gasoline  
D = total petroleum hydrocarbons as diesel  
B = benzene  
M = methyl tertiary butyl ether (MTBE)

**AEI CONSULTANTS**  
2500 CAMINO DIABLO, SUITE 200 WALNUT CREEK, CA

**Dissolved Phase Hydrocarbon  
Concentrations (9/19/08)**

325 Martin Luther King Jr. Way  
Oakland, California

**FIGURE 6**  
PROJECT No. 270308



## **TABLES**



**Table 1 - AEI Project # 270308**  
**Monitoring Well Construction Details**

Well ID	Date Installed	Top of Casing Elevation (ft amsl)	Well Depth (ft)	Slotted Casing (ft)	Slot Size (in)	Sand Interval (ft)	Sand Size	Bentonite Interval (ft)	Grout Interval (ft)
MW-1	08/10/07	14.92	18.0	8 - 18	0.010	7 - 18	# 2/12	7 - 8	0.75 - 7
MW-2	08/10/07	15.27	17.0	7 - 17	0.010	6 - 17	# 2/12	6 - 7	0.75 - 6
MW-3	08/10/07	15.26	18.0	8 - 18	0.010	7 - 18	# 2/12	7 - 8	0.75 - 7

Notes:  
ft amsl = feet above mean sea level

**Table 2 - AEI Project # 270308  
Groundwater Elevation Data**

Well ID (Screen Interval)	Date Collected	Well Elevation (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MW-1 (8 - 18)	8/21/2007	14.92	8.38	6.54
	11/21/2007	14.92	8.37	6.55
	2/26/2008	14.92	7.98	6.94
	<b>6/18/2008</b>	<b>14.92</b>	<b>8.41</b>	<b>6.51</b>
	<b>9/19/2008</b>	<b>14.92</b>	<b>8.56</b>	<b>6.36</b>
MW-2 (7 - 17)	8/21/2007	15.27	8.78	6.49
	11/21/2007	15.27	8.72	6.55
	2/26/2008	15.27	8.37	6.90
	<b>6/18/2008</b>	<b>15.27</b>	<b>8.82</b>	<b>6.45</b>
	<b>9/19/2008</b>	<b>15.27</b>	<b>8.92</b>	<b>6.35</b>
MW-3 (8 - 18)	8/21/2007	15.26	8.59	6.67
	11/21/2007	15.26	8.55	6.71
	2/26/2008	15.26	8.11	7.15
	<b>6/18/2008</b>	<b>15.26</b>	<b>8.62</b>	<b>6.64</b>
	<b>8/4/2008</b>	<b>15.26</b>	<b>8.65</b>	<b>6.61</b>
	<b>8/20/2008</b>	<b>15.26</b>	<b>8.68</b>	<b>6.58</b>
<b>9/19/2008</b>	<b>15.26</b>	<b>8.74</b>	<b>6.52</b>	

Event #	Date	Average Water Table Elevation (ft amsl)	Change from Previous Episode (ft)	Flow Direction (gradient) (ft/ft)
1	8/21/2007	6.57	NA	S (0.003)
2	11/21/2007	6.60	0.04	S (0.005)
3	2/26/2008	7.00	0.39	S (0.005)
<b>4</b>	<b>6/18/2008</b>	<b>6.53</b>	<b>-0.46</b>	<b>SSE (0.004)</b>
<b>5</b>	<b>9/19/2008</b>	<b>6.41</b>	<b>-0.12</b>	<b>S (0.003)</b>

ft amsl = feet above mean sea level

All water level depths are measured from the top of casing

**Table 3 - AEI Project # 270308**  
**Groundwater Monitoring Sample Analytical Data**

Sample ID	Date	TPHg µg/L	TPHd µg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L
<b>MW-1</b>	8/21/2007	<50	<50	15	<0.5	<0.5	<0.5	<0.5
	11/21/2007	<50	<50	12	<0.5	<0.5	<0.5	<0.5
	2/26/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	<b>6/18/2008</b>	<b>&lt;50</b>	<b>&lt;50</b>	-	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
	<b>9/19/2008</b>	<b>&lt;50</b>	<b>&lt;50</b>	-	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
<b>MW-2</b>	8/21/2007	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	11/21/2007	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	2/26/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	<b>6/18/2008</b>	<b>&lt;50</b>	<b>&lt;50</b>	-	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
	<b>9/19/2008</b>	<b>&lt;50</b>	<b>&lt;50</b>	-	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
<b>MW-3</b>	8/21/2007	24,000	2,100	<180	2,600	3,500	450	2,400
	11/21/2007	36,000	3,800	<500	4,900	1,200	230	2,700
	2/26/2008	31,000	5,400	-	4,200	1,900	590	2,200
	<b>6/18/2008</b>	<b>20,000</b>	<b>3,000</b>	-	<b>2,900</b>	<b>1,100</b>	<b>390</b>	<b>990</b>
	<b>8/4/2008</b>	<b>110,000</b>	<b>27,000</b>	-	<b>5,900</b>	<b>9,000</b>	<b>76</b>	<b>8,100</b>
	<b>8/20/2008</b>	<b>120,000</b>	<b>6,500</b>	-	<b>8,900</b>	<b>18,000</b>	<b>930</b>	<b>12,000</b>
	<b>9/19/2008</b>	<b>64,000</b>	<b>4,500</b>	-	<b>6,200</b>	<b>9,200</b>	<b>660</b>	<b>6,600</b>

Notes:

TPHd = total petroleum hydrocarbons as diesel (C10-C23) using EPA Method 8015

TPHg = total petroleum hydrocarbons as gasoline (C6-C12) using EPA Method 8015

Benzene, toluene, ethylbenzene, and xylenes using EPA Method 8021B

MTBE = methyl-tertiary butyl ether using EPA Method 8021B

µg/L= micrograms per liter

ND<50 = non detect at respective reporting limit

**Table 4 - AEI Project # 270308**  
**Groundwater Monitoring Sample Analytical Data**  
**Fuel Additives**

Sample ID	Date	MTBE µg/L	TAME µg/L	TBA µg/L	DIPE µg/L	ETBE µg/L	Ethanol µg/L	Methanol µg/L	EDB µg/L	1,2-DCA µg/L
<b>MW-1</b>	8/21/2007	18	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	5.2
	11/21/2007	-	-	-	-	-	-	-	-	-
	2/26/2008	16	-	-	-	-	-	-	<0.5	6.9
	<b>6/18/2008</b>	<b>15</b>	-	-	-	-	-	-	<b>&lt;0.5</b>	<b>5.4</b>
	<b>9/19/2008</b>	<b>4.2</b>	-	-	-	-	-	-	<b>&lt;0.5</b>	<b>6.8</b>
<b>MW-2</b>	8/21/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
	11/21/2007	-	-	-	-	-	-	-	-	-
	2/26/2008	<0.5	-	-	-	-	-	-	<0.5	<0.5
	<b>6/18/2008</b>	<b>&lt;0.5</b>	-	-	-	-	-	-	<b>&lt;0.5</b>	<b>&lt;0.5</b>
	<b>9/19/2008</b>	<b>&lt;0.5</b>	-	-	-	-	-	-	<b>&lt;0.5</b>	<b>&lt;0.5</b>
<b>MW-3</b>	8/21/2007	<5.0	<5.0	<50	<5.0	<5.0	<500	<5000	34	140
	11/21/2007	-	-	-	-	-	-	-	-	-
	2/26/2008	<12	-	-	-	-	-	-	31	220
	<b>6/18/2008</b>	<b>&lt;5.0</b>	-	-	-	-	-	-	<b>21</b>	<b>190</b>
	<b>8/4/2008</b>	<b>&lt;50</b>	-	-	-	-	-	-	<b>220</b>	<b>410</b>
	<b>8/20/2008</b>	<b>&lt;50</b>	-	-	-	-	-	-	<b>330</b>	<b>410</b>
	<b>9/19/2008</b>	<b>&lt;17</b>	-	-	-	-	-	-	<b>160</b>	<b>320</b>

Notes:

µg/L= micrograms per liter

ND<50 = non detect at respective reporting limit

MTBE - methyl tertiary butyl ether

TAME - tert-amyl methyl ether

TBA - tert-butyl alcohol

DIPE - diisopropyl ether

ETBE - ethyl tert-butyl ether

1,2-DCA - 1,2 - dichloroethane

EDB - 1,2 - dibromoethane

Fuel additives analysed by EPA Method 8260

**Table 5 - AEI Project # 270308**  
**Groundwater Monitoring Sample Analytical Data**  
**Metals**

Sample ID	Date	As µg/L	Ba µg/L	Cd µg/L	Cr (total) / Cr VI µg/L	Cu µg/L	Fe (total) µg/L	Pb µg/L	Se µg/L
<b>MW-1</b>	8/21/2007	-	-	-	-	-	-	<0.5	-
	<b>6/18/2008*</b>	0.83	17	<0.25	3.9 / 2.9	<5.0	<20	0.70	<0.5
<b>MW-2</b>	8/21/2007	-	-	-	-	-	-	<0.5	-
	<b>6/18/2008*</b>	0.90	16	<0.25	5.8 / 4.6	<5.0	56	<0.5	<0.5
<b>MW-3</b>	8/21/2007	-	-	-	-	-	-	8.6	-
	<b>6/18/2008*</b>	9.9	26	<0.25	<0.5 / <0.2	<5.0	3,700	4.3	<0.5
	<b>8/4/2008</b>	75	64	<0.25	120 / 130	45	-	30	14
	<b>8/20/2008</b>	77	42	<0.25	73 / 54	21	260	34	9.6
	<b>9/19/2008</b>	62	<50	<2.5	13 / 5.0	19	390	28	5.8

Notes:

µg/L= micrograms per liter

ND<50 = non detect at respective reporting limit

As - arsenic

Ba - barium

Cd - cadmium

Cr - chromium

Cr VI - hexavalent chromium

Cu - copper

Fe - iron

Pb - lead

Se - selenium

Hexavalent chromium analyzed by E218.6, all others by E200.8

\*Sample for hexavalent chromium (E218.6) gathered on 6/19/08, others on 6/18/08

## **APPENDIX A**

### **MONITORING WELL FIELD SAMPLING FORMS**



**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-1**

Project Name:	ALLEN	Date of Sampling:	6/18/2008
Job Number:	270308	Name of Sampler:	A Nieto
Project Address:	325 Martin Luther King Jr Way, Oakland Ca		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK <span style="float:right">▼</span>		
Elevation of Top of Casing (feet above msl)	14.92		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.41		
Water Elevation (feet above msl)	6.51		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	<b>4.6</b>		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	NA

**GROUNDWATER SAMPLES**

Number of Samples/Container Size							
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	16.67	6.44	2,193	3.69	191.0	
	2	16.71	6.68	2,248	1.83	113.0	
	3	16.64	6.71	2,279	1.46	86.2	
	4	16.60	6.72	2,214	1.14	75.7	
	5	16.57	6.70	2,139	0.87	72.5	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

No hydrocarbon odors notes.



**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-2**

Project Name:	ALLEN	Date of Sampling:	6/18/2008
Job Number:	270308	Name of Sampler:	A Nieto
Project Address:	325 Martin Luther King Jr Way, Oakland Ca		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	15.27		
Depth of Well	17.00		
Depth to Water (from top of casing)	8.82		
Water Elevation (feet above msl)	6.45		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	4.7		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	NA

**GROUNDWATER SAMPLES**

Number of Samples/Container Size							
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	17.09	6.69	1,559	3.84	76.5	
	2	16.99	6.63	1,524	3.16	72.6	
	3	16.97	6.61	1,516	2.41	73.5	
	4	16.98	6.59	1,481	1.64	74.6	
	5	16.99	6.58	1,488	0.61	74.9	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

No hydrocarbon odors noted.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	ALLEN	Date of Sampling:	6/18/2008
Job Number:	270308	Name of Sampler:	A Nieto
Project Address:	325 Martin Luther King Jr Way, Oakland Ca		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	15.26		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.62		
Water Elevation (feet above msl)	6.64		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	4.2		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Initially grey, clears quickly		
Free Product Present?	No	Thickness (ft):	NA

**GROUNDWATER SAMPLES**

Number of Samples/Container Size							
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	17.03	6.43	1,372	2.09	-81.7	
	2	16.98	6.35	1,371	1.62	-89.1	
	3	16.95	6.31	1,412	1.02	-92.3	
	4	16.89	6.31	1,422	0.71	-96.2	
	5	16.90	6.33	1,315	0.53	-97.5	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum odors noted.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	ALLEN	Date of Sampling:	8/4/2008
Job Number:	270308	Name of Sampler:	A Nieto
Project Address:	325 Martin Luther King Jr Way, Oakland, Ca		

8/4/2008

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	15.26		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.65		
Water Elevation (feet above msl)	6.61		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	<b>4.2</b>		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Yellowish brown		
Free Product Present?	No	Thickness (ft):	

**GROUNDWATER SAMPLES**

Number of Samples/Container Size							
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	17.96	8.86	4,856	6.87	-52.1	
	2	18.09	9.23	4,256	6.24	-56.3	
	3	18.18	9.06	4,821	5.63	-51.2	
	4	17.98	9.56	5,187	4.62	-61.8	
	5	17.75	9.87	5,254	4.81	-65.3	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum odors noted.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	ALLEN	Date of Sampling:	8/20/2008
Job Number:	270308	Name of Sampler:	A Nieto
Project Address:	325 Martin Luther King Jr Way, Oakland, Ca		

8/4/2008

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	15.26		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.68		
Water Elevation (feet above msl)	6.58		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	<b>4.2</b>		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Yellowish brown		
Free Product Present?	No	Thickness (ft):	

**GROUNDWATER SAMPLES**

Number of Samples/Container Size							
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	17.96	8.86	4,856	5.98	-43.6	
	2	18.09	9.23	4,256	5.57	-48.5	
	3	18.18	9.06	4,821	5.83	-58.6	
	4	17.98	9.56	5,187	5.12	-51.9	
	5	17.75	9.87	5,254	5.02	-62.1	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum odors noted.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-1**

Project Name:	ALLEN	Date of Sampling:	9/19/2008
Job Number:	270308	Name of Sampler:	A Nieto
Project Address:	325 Martin Luther King Jr Way, Oakland Ca		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	14.92		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.56		
Water Elevation (feet above msl)	6.36		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	<b>4.8</b>		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	

**GROUNDWATER SAMPLES**

Number of Samples/Container Size							
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	17.95	7.01	1,035	6.8	80.3	
	2	18.32	7.01	1,055	6.30	81.5	
	3	18.18	7.02	1,074	6.07	82.1	
	4	17.95	7.01	1,070	5.85	87.1	
	5	17.76	6.99	1,021	5.65	94.6	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Light brown with no hydrocarbon odors notes.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-2**

Project Name:	ALLEN	Date of Sampling:	9/19/2008
Job Number:	270308	Name of Sampler:	A Nieto
Project Address:	325 Martin Luther King Jr Way, Oakland Ca		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	15.27		
Depth of Well	17.00		
Depth to Water (from top of casing)	8.92		
Water Elevation (feet above msl)	6.35		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	<b>4.7</b>		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Initially light brown, clears after 1 gallon		
Free Product Present?	No	Thickness (ft):	

**GROUNDWATER SAMPLES**

Number of Samples/Container Size							
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	18.29	7.33	847	4.1	60.3	
	2	18.67	7.15	874	3.85	69.3	
	3	18.51	7.12	866	3.73	72.5	
	4	18.28	7.12	828	3.57	72.4	
	5	18.11	7.12	833	3.66	72.8	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

No hydrocarbon odors noted.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	ALLEN	Date of Sampling:	9/19/2008
Job Number:	270308	Name of Sampler:	A Nieto
Project Address:	325 Martin Luther King Jr Way, Oakland Ca		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	15.26		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.74		
Water Elevation (feet above msl)	6.52		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	<b>4.3</b>		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Initially yellowish brown, clears by 0.5 gallons		
Free Product Present?	No	Thickness (ft):	

**GROUNDWATER SAMPLES**

Number of Samples/Container Size							
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	18.53	8.43	4,947	5.13	-56.9	
	2	18.81	8.44	5,027	4.34	-62.6	
	3	18.56	8.72	5,437	3.77	-66.6	
	4	18.41	8.95	5,891	3.62	-67.2	
	5	18.25	9.05	6,517	3.85	-68.7	

**COMMENTS (i.e., sample odor, well recharge time & percent, etc.)**

Strong petroleum odors noted.

## **APPENDIX B**

# **LABORATORY ANALYTICAL AND CHAIN OF CUSTODY DOCUMENTATION**







**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: # 270308; Allen	Date Sampled: 06/18/08
		Date Received: 06/18/08
	Client Contact: Adrian Angel	Date Reported: 06/23/08
	Client P.O.:	Date Completed: 06/20/08

**WorkOrder: 0806502**

June 23, 2008

Dear Adrian:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **# 270308; Allen,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.

0806502

**McCAMPBELL ANALYTICAL INC.**

110 2<sup>nd</sup> AVENUE SOUTH, #D7  
PACHECO, CA 94553-5560

Telephone: (925) 798-1620

Fax: (925) 798-1622

**CHAIN OF CUSTODY RECORD**

**TURN AROUND TIME**

RUSH  24 HR  48 HR  72 HR  5 DAY

EDF Required?

Yes  No

Email PDF Report:  YES

Report To: Adrian Angel      Bill To: Same  
Company: AEI Consultants  
2500 Camino Diablo, Suite 200  
Walnut Creek, CA 94597      E-Mail: aangel@aeiconsultants.com  
Tel: (925) 944-2899, extension 132      Fax: (925) 944-2895  
Project #: 270308      Project Name: Allen  
Project Location: 325 Martin Luther King Jr. Way, Oakland, CA  
Sampler Signature: *[Signature]*

**Analysis Request**

**Other**

**Comments**

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other				
MW-1		6/18/08	12:15	7	Plastic 5/16	X						X						
MW-2		↓	11:45	↓	↓	X						X						
MW-3		↓	11:20	↓	↓	X						X						

BTEX & TPH as Gas (602/8020 + 8015)/MTBE																		
TPH mutirange + Motor oil																		
Total Petroleum Oil & Grease (5520 E&F/B&F)																		
Total Petroleum Hydrocarbons (418.1)																		
HVOCs EPA 8260 (8010 list)																		
BTEX ONLY (EPA 602 / 8020)																		
Pesticides EPA 608 / 8080																		
PCBs EPA 608 / 8080																		
VOCs EPA 624 / 8260																		
EPA 625 / 8270																		
PAH's / PNA's by EPA 625 / 8270 / 8310																		
CAM-17 Metals																		
LUFT 5 Metals																		
Lead (7240/7421/239.2/6010)																		
<del>TPH-g + BTEX-folise (qualis)</del>																		
Diss. Arsenic, Barium, Cadmium, total and hexavalent Chromium, Copper, total iron, lead, Selenium, <del>total</del>																		
MTBE, EDB, 1-2-DCA (2-60)																		

250-cc poly bottles for metals were filtered in field w/ 0.45 micron filter, HCl, HNO<sub>3</sub> preserved

metals

CANCEL 2/8/06 PER Adnan 6/18/08

Relinquished By: <i>[Signature]</i>	Date: 6/18/08	Time: 4:30	Received By: K. Burks
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 17.6

GOOD CONDITION       PRESERVATION APPROPRIATE

HEAD SPACE ABSENT       CONTAINERS

DECHLORINATED IN LAB \_\_\_\_\_      PERSERVED IN LAB \_\_\_\_\_

VOAS    O&G    METALS    OTHER

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0806502

ClientCode: AEL

WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

Report to:	Adrian Angel	Email: aangel@aeiconsultants.com	Bill to:	Denise Mockel	Requested TAT: 5 days
	AEI Consultants	cc:		AEI Consultants	Date Received: 06/18/2008
	2500 Camino Diablo, Ste. #200	PO:		2500 Camino Diablo, Ste. #200	Date Printed: 06/18/2008
	Walnut Creek, CA 94597	ProjectNo: # 270308; Allen		Walnut Creek, CA 94597	
	(408) 559-7600 FAX (408) 559-7601			dmockel@aeiconsultants.com	

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0806502-001	MW-1	Water	6/18/2008 12:15	<input type="checkbox"/>	D	A	C	C	A	B						
0806502-002	MW-2	Water	6/18/2008 12:15	<input type="checkbox"/>	D	A	C	C		B						
0806502-003	MW-3	Water	6/18/2008 11:20	<input type="checkbox"/>	D	A	C	C		B						

**Test Legend:**

1	5-OXYS_W	2	G-MBTEX_W	3	METALSMS DISS	4	PRDISSOLVED	5	PREFD REPORT
6	TPH(D)_W	7		8		9		10	
11		12							

Prepared by: Kimberly Burks

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



### Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **6/18/2008 4:17:17 PM**

Project Name: **# 270308; Allen**

Checklist completed and reviewed by: **Kimberly Burks**

WorkOrder N°: **0806502** Matrix Water

Carrier: Client Drop-In

#### Chain of Custody (COC) Information

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes  No
- Container/Temp Blank temperature Cooler Temp: NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
- Sample labels checked for correct preservation? Yes  No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted:

Date contacted:

Contacted by:

Comments:



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"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: # 270308; Allen	Date Sampled: 06/18/08
		Date Received: 06/18/08
	Client Contact: Adrian Angel	Date Extracted: 06/19/08-06/20/08
	Client P.O.:	Date Analyzed 06/19/08-06/20/08

### Oxygenated Volatile Organics by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0806502

Lab ID	0806502-001D	0806502-002D	0806502-003D		Reporting Limit for DF =1	
Client ID	MW-1	MW-2	MW-3			
Matrix	W	W	W			
DF	1	1	10			

Compound	Concentration				ug/kg	µg/L
	1,2-Dibromoethane (EDB)	ND	ND	21		NA
1,2-Dichloroethane (1,2-DCA)	5.4	ND	190		NA	0.5
Methyl-t-butyl ether (MTBE)	15	ND	ND<5.0		NA	0.5

### Surrogate Recoveries (%)

%SS1:	101	102	97		
Comments					

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.



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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: # 270308; Allen	Date Sampled: 06/18/08
		Date Received: 06/18/08
	Client Contact: Adrian Angel	Date Extracted: 06/19/08-06/20/08
	Client P.O.:	Date Analyzed 06/19/08-06/20/08

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0806502

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND	---	ND	ND	ND	ND	1	92
002A	MW-2	W	ND	---	ND	ND	ND	ND	1	93
003A	MW-3	W	20,000,d1	---	2900	1100	390	990	20	105

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant



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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: # 270308; Allen	Date Sampled: 06/18/08
		Date Received: 06/18/08
	Client Contact: Adrian Angel	Date Extracted: 06/18/08
	Client P.O.:	Date Analyzed 06/19/08

### Metals\*

Extraction Method: E200.8

Analytical Method: E200.8

Work Order: 0806502

Lab ID	0806502-001C	0806502-002C	0806502-003C		Reporting Limit for DF =1	
Client ID	MW-1	MW-2	MW-3			
Matrix	Water	Water	Water			
DF	1	1	1			
Extraction Type	DISS.	DISS.	DISS.		S	W

Compound	Concentration			µg/kg	µg/L
Arsenic	0.83	0.90	9.9	NA	0.5
Barium	17	16	26	NA	5.0
Cadmium	ND	ND	ND	NA	0.25
Copper	ND	ND	ND	NA	0.5
Iron	ND	56	3700	NA	20
Lead	0.70	ND	4.3	NA	0.5
Selenium	ND	ND	ND	NA	0.5

### Surrogate Recoveries (%)

%SS:	N/A	N/A	N/A		
------	-----	-----	-----	--	--

<b>Comments</b>					
-----------------	--	--	--	--	--

\*water samples are reported in µg/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

# means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

TOTAL = acid digestion.

WET = Waste Extraction Test (STLC).

DI WET = Waste Extraction Test using de-ionized water.



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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: # 270308; Allen	Date Sampled: 06/18/08
		Date Received: 06/18/08
	Client Contact: Adrian Angel	Date Extracted: 06/18/08
	Client P.O.:	Date Analyzed 06/20/08

### Total Extractable Petroleum Hydrocarbons\*

Extraction method SW3510C

Analytical methods: SW8015C

Work Order: 0806502

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0806502-001B	MW-1	W	ND	1	118
0806502-002B	MW-2	W	ND	1	120
0806502-003B	MW-3	W	3000,e4	1	119

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

e4) gasoline range compounds are significant.





### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0806502

EPA Method SW8015C		Extraction SW3510C			BatchID: 36331			Spiked Sample ID: N/A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	120	120	0	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	118	119	0.364	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 36331 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0806502-001B	06/18/08 12:15 PM	06/18/08	06/20/08 7:00 AM	0806502-002B	06/18/08 12:15 PM	06/18/08	06/20/08 8:08 AM
0806502-003B	06/18/08 11:20 AM	06/18/08	06/20/08 9:17 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0806502

EPA Method SW8260B		Extraction SW5030B			BatchID: 36354			Spiked Sample ID: 0806485-026B				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	98	105	7.08	94.4	97.9	3.65	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	92.7	102	9.13	78.4	84.5	7.50	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	115	124	7.47	103	106	2.73	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	121	129	6.73	98.5	102	3.44	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	107	116	7.71	96.6	100	3.77	70 - 130	30	70 - 130	30
%SS1:	103	25	99	101	2.01	96	97	0.445	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 36354 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0806502-001D	06/18/08 12:15 PM	06/19/08	06/19/08 10:41 PM	0806502-002D	06/18/08 12:15 PM	06/19/08	06/19/08 11:24 PM
0806502-003D	06/18/08 11:20 AM	06/20/08	06/20/08 12:06 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



### QC SUMMARY REPORT FOR E200.8

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0806502

EPA Method E200.8	Extraction E200.8			BatchID: 36364			Spiked Sample ID: 0806516-001C					
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Arsenic	1.4	10	103	105	2.12	97.5	95.5	2.09	70 - 130	20	80 - 120	20
Barium	110	100	93.2	97.4	2.08	94.2	92.3	2.07	70 - 130	20	80 - 120	20
Cadmium	ND	10	92.7	95.3	2.83	99	97.3	1.72	70 - 130	20	80 - 120	20
Copper	47	10	100	122	3.71	100	97.9	2.44	70 - 130	20	80 - 120	20
Iron	200	100	89.3	97.2	2.74	102	97.8	4.56	70 - 130	20	70 - 130	20
Lead	ND	10	95.4	97	1.58	95.9	94.4	1.49	70 - 130	20	80 - 120	20
Selenium	4.0	10	98.6	102	2.77	96.6	90.7	6.20	70 - 130	20	80 - 120	20
%SS:	100	750	98	101	2.25	97	97	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 36364 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0806502-001C	06/18/08 12:15 PM	06/18/08	06/19/08 1:44 AM	0806502-002C	06/18/08 12:15 PM	06/18/08	06/19/08 1:53 AM
0806502-003C	06/18/08 11:20 AM	06/18/08	06/19/08 2:01 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0806502

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 36353			Spiked Sample ID: 0806485-027A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>£</sup>	ND	60	101	100	1.19	98.3	96.4	1.95	70 - 130	20	70 - 130	20
MTBE	ND	10	113	105	7.84	110	111	0.781	70 - 130	20	70 - 130	20
Benzene	ND	10	107	105	1.76	103	99.4	3.20	70 - 130	20	70 - 130	20
Toluene	ND	10	96.6	96.6	0	92.2	89.6	2.95	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	107	107	0	102	98.9	3.09	70 - 130	20	70 - 130	20
Xylenes	ND	30	105	106	0.801	98.9	96.1	2.85	70 - 130	20	70 - 130	20
%SS:	102	10	97	98	0.656	98	98	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 36353 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0806502-001A	06/18/08 12:15 PM	06/19/08	06/19/08 7:23 AM	0806502-002A	06/18/08 12:15 PM	06/19/08	06/19/08 7:57 AM
0806502-003A	06/18/08 11:20 AM	06/20/08	06/20/08 3:59 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

**McC Campbell Analytical, Inc.**

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #27030; ALLEN, Martin Luther King Jr. Way Oakland	Date Sampled: 06/19/08
		Date Received: 06/19/08
	Client Contact: Adrian Angel	Date Reported: 06/24/08
	Client P.O.:	Date Completed: 06/23/08

**WorkOrder: 0806551**

June 24, 2008

Dear Adrian:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **#27030; ALLEN, Martin Luther Kin**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.

0806551



**McCAMPBELL ANALYTICAL, INC.**  
 1534 WILLOW PASS ROAD  
 PITTSBURG, CA 94565-1701  
 Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
 Telephone: (877) 252-9262 Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**  
**TURN AROUND TIME**  RUSH  24 HR  48 HR  72 HR  5 DAY  
 GeoTracker EDF  PDF  Excel  Write On (DW)   
 Check if sample is effluent and "J" flag is required

Report To: Admin Angel Bill To: same  
 Company: AEI  
 E-Mail:  
 Tele: (800) 800-3224 Fax: (925) 944 28 95  
 Project #: 27030 Project Name: ALLEN  
 Project Location: Martin Luther King Jr. way Oakland.  
 Sampler Signature: [Signature]

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
✓ MW-1		6/19/08		1	plastic	X					X	X					Filter Samples for Metals analysis: <u>Yes</u> / No
✓ MW-2				1	"	X					X	X					
✓ MW-3				1	"	X					X	X					

Relinquished By: [Signature] Date: 6/19/08 Time: 6:30 Received By: H. BURKE  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

ICEA# 4.0 ✓  
 GOOD CONDITION ✓  
 HEAD SPACE ABSENT ✓  
 DECHLORINATED IN LAB ✓  
 APPROPRIATE CONTAINERS ✓  
 PRESERVED IN LAB ✓  
 VOAS O&G METALS OTHER  
 PRESERVATION pH<2

**McC Campbell Analytical, Inc.**



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

**CHAIN-OF-CUSTODY RECORD**

**WorkOrder: 0806551**

**ClientCode: AEL**

WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Report to: Adrian Angel    Email: aangel@aeiconsultants.com    Bill to: Denise Mockel    Requested TAT: **5 days**  
 AEI Consultants    cc: AEI Consultants    AEI Consultants  
 2500 Camino Diablo, Ste. #200    PO: 2500 Camino Diablo, Ste. #200    *Date Received: 06/19/2008*  
 Walnut Creek, CA 94597    ProjectNo: #27030; ALLEN, Martin Luther King Jr.    Walnut Creek, CA 94597    *Date Printed: 06/19/2008*  
 Way Oakland  
 (408) 559-7600    FAX (408) 559-7601    dmockel@aeiconsultants.com

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0806551-001	MW-1	Water	6/19/2008	<input type="checkbox"/>	A	A										
0806551-002	MW-2	Water	6/19/2008	<input type="checkbox"/>	A											
0806551-003	MW-3	Water	6/19/2008	<input type="checkbox"/>	A											

**Test Legend:**

1	218.6 W	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

**Prepared by: Ana Venegas**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.



**Sample Receipt Checklist**

Client Name: **AEI Consultants** Date and Time Received: **6/19/08 6:55:30 PM**  
Project Name: **#27030; ALLEN, Martin Luther King Jr. Way Oakland** Checklist completed and reviewed by: **Ana Venegas**  
WorkOrder N°: **0806551** Matrix Water Carrier: Client Drop-In

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
Chain of custody signed when relinquished and received? Yes  No   
Chain of custody agrees with sample labels? Yes  No   
Sample IDs noted by Client on COC? Yes  No   
Date and Time of collection noted by Client on COC? Yes  No   
Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
Shipping container/cooler in good condition? Yes  No   
Samples in proper containers/bottles? Yes  No   
Sample containers intact? Yes  No   
Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No   
Container/Temp Blank temperature Cooler Temp: 8°C NA   
Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted   
Sample labels checked for correct preservation? Yes  No   
TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted: Date contacted: Contacted by:

Comments:





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"When Quality Counts"

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Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #27030; ALLEN, Martin Luther King Jr. Way Oakland	Date Sampled: 06/19/08
	Client Contact: Adrian Angel	Date Received: 06/19/08
	Client P.O.:	Date Extracted: 06/19/08
		Date Analyzed: 06/19/08

## Hexachrome by IC\*

Analytical Method: E218.6

Work Order: 0806551

Lab ID	Client ID	Matrix	Hexachrome	DF
0806551-001A	MW-1	W	2.9	1
0806551-002A	MW-2	W	4.6	1
0806551-003A	MW-3	W	ND	1

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	0.2 µg/L
	S	NA

\* water samples are reported in µg/L.

N/A means surrogate not applicable to this analysis; # surrogate diluted out of range or surrogate coelutes with another peak.



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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #27030; ALLEN, Martin Luther King Jr. Way Oakland	Date Sampled: 06/19/08
	Client Contact: Adrian Angel	Date Received: 06/19/08
	Client P.O.:	Date Extracted: 07/03/08
		Date Analyzed 07/09/08

### Metals\*

Extraction method E200.8

Analytical methods E200.8

Work Order: 0806551

Lab ID	Client ID	Matrix	Extraction Type	Chromium	DF	% SS
0806551-001A	MW-1	W	TOTAL	3.9	1	98
0806551-002A	MW-2	W	TOTAL	5.8	1	97
0806551-003A	MW-3	W	TOTAL	ND	1	95

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	0.5	µg/L
	S	TOTAL	NA	mg/Kg

\*water samples are reported in ug/L, product/oil/non-aqueous liquid samples and all TCLP / WET / DI WET / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

# means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

TOTAL = acid digestion.  
WET = Waste Extraction Test (STLC).  
DI WET = Waste Extraction Test using de-ionized water.



### QC SUMMARY REPORT FOR E218.6

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0806551

EPA Method E218.6		Extraction E218.6			BatchID: 36363			Spiked Sample ID: 0806496-001c				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Hexachrome	0.28	25	100	102	1.76	104	103	0.424	90 - 110	10	90 - 110	10

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 36363 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0806551-001A	06/19/08	06/19/08	06/19/08 8:27 PM	0806551-002A	06/19/08	06/19/08	06/19/08 8:46 PM
0806551-003A	06/19/08	06/19/08	06/19/08 9:04 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



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Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN	Date Sampled: 08/04/08
		Date Received: 08/05/08
	Client Contact: Adrian Angel	Date Reported: 08/12/08
	Client P.O.:	Date Completed: 08/12/08

**WorkOrder: 0808108**

August 12, 2008

Dear Adrian:

Enclosed within are:

- 1) The results of the **1** analyzed sample from your project: **#270308; ALLEN,**
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.

**McCAMPBELL ANALYTICAL, INC.**

1534 WILLOW PASS ROAD  
PITTSBURG, CA 94565-1701

0808108

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (877) 252-9262 Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)

Report To: Adrian Angel Bill To: same  
 Company: AEI  
 E-Mail:  
 Tele: (915) 944-2899 Fax: ( ) 944-2899  
 Project #: 270308 Project Name: ALLEN  
 Project Location: Martin Luther King Jr way Oakland  
 Sampler Signature: [Signature]

Analysis Request											Other	Comments					
MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel / Motor Oil (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCS)	EPA 505 / 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic CI Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)		Filter Samples for Metals analysis: Yes / No

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
+ ML0-3		8/9/08	3:00	11	1/2 liter	X						X	X				Hold.

Relinquished By: [Signature] Date: 5:15 Time: 8/4/08 Received By: [Signature]  
 Relinquished By: Date: Time: Received By:  
 Relinquished By: Date: Time: Received By:

COMMENTS:  
 ICE/T° 18  
 GOOD CONDITION   
 HEAD SPACE ABSENT   
 DECHLORINATED IN LAB  MA  
 APPROPRIATE CONTAINERS  
 PRESERVED IN LAB  NO  
 VOCS  O&G METALS OTHER  
 PRESERVATION  pH<2

★ off hold 8/5/08 PER A.A.



**AEI CONSULTANTS**  
 2500 Camino Diablo, Suite 200  
 Walnut Creek, CA 94597  
 PHONE: (925) 283-6000  
 (800) 801-3224  
 FAX: (925) 944-2895

Date: 8/5/08

Hard Copy Sent? Y  N

To: McCampbell

Phone:

Fax: (925) 252-9269

From: Adrian Angel in San Jose

Pages: 2, including this cover page

Subject: 325 MLK Jr Way, Oakland

please analyze sample MW-3 for →

- ① TPH-g, TPH-d, BTEX (8021/8015)
- ② Dissolved arsenic, barium, cadmium, total chromium, Hexavalent chromium (E218-b), copper, total lead, and Selenium by E200-8.
- ③ MTBE, EDB, 1,2-DCA (8260)

Thanks!

Adrian

**McCAMPBELL ANALYTICAL, INC.**  
 1534 WILLOW PASS ROAD  
 PITTSBURG, CA 94565-1701  
 Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
 Telephone: (877) 252-9262 Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**  
**TURN AROUND TIME**       
 RUSH 24 HR 48 HR 72 HR 5 DAY  
**GeoTracker EDF**  **PDF**  **Excel**  **Write On (DW)**

**Report To:** Adrian Angel **Bill To:** same  
**Company:** AEI  
**E-Mail:**  
**Tele:** (915) 944-7899 **Fax:** ( ) 944 7899  
**Project #:** 270308 **Project Name:** ALLEN  
**Project Location:** Martin Luther King Jr way Oakland  
**Sampler Signature:** [Signature]

SAMPLE ID		LOCATION/ Field Point Name		SAMPLING		Type Containers		MATRIX				METHOD PRESERVED		Analysis Request	Other	Comments
		Date	Time	# Containers		Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other		
ML-3		8/4/08	3:00	11	Vial	X					X	X	X	MTBE / BTEX & TPH as Gas (602 / 8023 + 8016) MTBE / BTEX ONLY (EPA 602 / 8021) TPH as Diesel / Motor Oil (8915) Total Petroleum Oil & Grease (1664 / 5520 E/B&F) Total Petroleum Hydrocarbons (418.1) EPA 902.1 / 601 / 8010 / 8021 (RVOCs) EPA 905/608 / 8081 (CI Pesticides) EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners EPA 907 / 8181 (NP Pesticides) EPA 515 / 8151 (Acidic CI Herbicides) <del>MTBE, EPB, PCE, TCE, DCA, BTEX</del> EPA 525.3 / 625 / 8270 (SVOCs) EPA 8270 SIM / 8310 (PAHs / PNA)s CAM 17 Metals (200.7 / 200.8 / 4010 / 6020) LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020) Lead (200.7 / 200.8 / 6010 / 6020) TPH-g, TPH-d, BTEX (8021/8015) Dissolved arsenic, barium, cadmium, total and hexavalent chromium, copper, iron, lead, selenium	TPH-g, TPH-d, BTEX (8021/8015) Dissolved arsenic, barium, cadmium, total and hexavalent chromium, copper, iron, lead, selenium	Enter Samples for Metals analysis Yes/No Sample filtered in field!

**Relinquished By:** [Signature] **Date:** 5/15 **Time:** 8:40 **Received By:** [Signature]  
**Relinquished By:** **Date:** **Time:** **Received By:**  
**Relinquished By:** **Date:** **Time:** **Received By:**

**COMMENTS:**  
 ICE/ GOOD CONDITION  
 HEAD SPACE ABSENT  
 DECHLORINATED IN LAB  
 APPROPRIATE CONTAINERS  
 PRESERVED IN LAB  
 PRESERVATION VOAS O&G METALS OTHER pH<2

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

# CHAIN-OF-CUSTODY RECORD

**WorkOrder: 0808108**

**ClientCode: AEL**

WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

<b>Report to:</b>	Adrian Angel	Email: aangel@aeiconsultants.com	<b>Bill to:</b>	Denise Mockel	<b>Requested TAT:</b>	<b>5 days</b>
	AEI Consultants	cc:		AEI Consultants	<b>Date Received:</b>	<b>08/05/2008</b>
	2500 Camino Diablo, Ste. #200	PO:		2500 Camino Diablo, Ste. #200	<b>Date Printed:</b>	<b>08/06/2008</b>
	Walnut Creek, CA 94597	ProjectNo: #270308; ALLEN		Walnut Creek, CA 94597		
	(925) 283-6000    FAX (925) 944-2895			dmockel@aeiconsultants.com		

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0808108-001	MW-3	Water	8/4/2008 15:00	<input type="checkbox"/>	D	C	A	E	A	B						

**Test Legend:**

1	218_6_W	2	8260VOC_W	3	G-MBTX_W	4	METALSMS DISS	5	PREF REPORT
6	TPH(D)_W	7		8		9		10	
11		12							

**Prepared by: Samantha Arbuckle**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.





### Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **8/5/2008 6:31:34 PM**

Project Name: **#270308; ALLEN**

Checklist completed and reviewed by: **Samantha Arbuckle**

WorkOrder N°: **0808108** Matrix Water

Carrier: Client Drop-In

#### Chain of Custody (COC) Information

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes  No
- Container/Temp Blank temperature Cooler Temp: 1.8°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
- Sample labels checked for correct preservation? Yes  No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
- Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted:

Date contacted:

Contacted by:

Comments: Samples were field filtered.



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 Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN	Date Sampled: 08/04/08
		Date Received: 08/05/08
	Client Contact: Adrian Angel	Date Extracted: 08/06/08
	Client P.O.:	Date Analyzed 08/06/08

## Hexachrome by IC\*

Analytical Method: E218.6

Work Order: 0808108

Lab ID	Client ID	Matrix	Hexachrome	DF
0808108-001D	MW-3	W	130	10

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	0.2 µg/L	
	S	NA	

\* water samples are reported in µg/L.

N/A means surrogate not applicable to this analysis; # surrogate diluted out of range or surrogate coelutes with another peak.



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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN	Date Sampled: 08/04/08
		Date Received: 08/05/08
	Client Contact: Adrian Angel	Date Extracted: 08/08/08
	Client P.O.:	Date Analyzed 08/08/08

### Volatile Organics by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0808108

Lab ID	0808108-001C				Reporting Limit for DF =1	
Client ID	MW-3					
Matrix	W					
DF	100					

Compound	Concentration				ug/kg	µg/L
1,2-Dibromoethane (EDB)	220				NA	0.5
1,2-Dichloroethane (1,2-DCA)	410				NA	0.5
Methyl-t-butyl ether (MTBE)	ND<50				NA	0.5

### Surrogate Recoveries (%)

%SS1:	97				
%SS2:	94				
%SS3:	98				

### Comments

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.



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 Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN	Date Sampled: 08/04/08
		Date Received: 08/05/08
	Client Contact: Adrian Angel	Date Extracted: 08/06/08
	Client P.O.:	Date Analyzed 08/06/08

## Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0808108

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-3	W	110,000,d1	---	5900	9000	76	8100	50	106

Reporting Limit for DF =1; ND means not detected at or	W	50	5.0	0.5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant



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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN	Date Sampled: 08/04/08
		Date Received: 08/05/08
	Client Contact: Adrian Angel	Date Extracted: 08/05/08
	Client P.O.:	Date Analyzed 08/09/08

### Metals\*

Extraction Method: E200.8

Analytical Method: E200.8

Work Order: 0808108

Lab ID	0808108-001E				Reporting Limit for DF =1	
Client ID	MW-3					
Matrix	Water					
DF	1					
Extraction Type	DISS.				S	W

Compound	Concentration				µg/kg	µg/L
Arsenic	75				NA	0.5
Barium	64				NA	5.0
Cadmium	ND				NA	0.25
Chromium	120				NA	0.5
Copper	45				NA	0.5
Lead	30				NA	0.5
Selenium	14				NA	0.5

### Surrogate Recoveries (%)

%SS:	N/A				
------	-----	--	--	--	--

<b>Comments</b>					
-----------------	--	--	--	--	--

\*water samples are reported in µg/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

# means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

TOTAL = acid digestion.

WET = Waste Extraction Test (STLC).

DI WET = Waste Extraction Test using de-ionized water.



# McC Campbell Analytical, Inc.

"When Quality Counts"

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Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN	Date Sampled: 08/04/08
	Client Contact: Adrian Angel	Date Received: 08/05/08
	Client P.O.:	Date Extracted: 08/05/08
		Date Analyzed 08/06/08

### Total Extractable Petroleum Hydrocarbons\*

Extraction method SW3510C

Analytical methods: SW8015C

Work Order: 0808108

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0808108-001B	MW-3	W	27,000,e4/e8	10	106

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

e4) gasoline range compounds are significant.; and/or e8) kerosene/kerosene range/jet fuel range



### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37401

WorkOrder 0808108

EPA Method SW8021B/8015Cm		Extraction SW5030B							Spiked Sample ID: 0808111-009			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	60	93.7	90.7	3.27	98.5	104	5.71	70 - 130	20	70 - 130	20
MTBE	ND	10	103	97.5	5.25	113	92.8	19.5	70 - 130	20	70 - 130	20
Benzene	ND	10	93.9	95.4	1.57	99.9	95.5	4.54	70 - 130	20	70 - 130	20
Toluene	ND	10	84.8	86.3	1.72	110	106	4.02	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	94.2	95.8	1.64	108	104	4.07	70 - 130	20	70 - 130	20
Xylenes	ND	30	93.9	94.4	0.465	118	115	3.31	70 - 130	20	70 - 130	20
%SS:	102	10	96	98	1.59	98	91	6.61	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 37401 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808108-001A	08/04/08 3:00 PM	08/06/08	08/06/08 5:21 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



### QC SUMMARY REPORT FOR E218.6

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37409

WorkOrder 0808108

EPA Method E218.6		Extraction E218.6							Spiked Sample ID: 0808108-001d			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Hexachrome	130	25	94.8	99.2	0.715	95.6	94.5	1.14	90 - 110	10	90 - 110	10

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 37409 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808108-001D	08/04/08 3:00 PM	08/06/08	08/06/08 9:00 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery =  $100 * (MS - Sample) / (Amount Spiked)$ ; RPD =  $100 * (MS - MSD) / ((MS + MSD) / 2)$ .

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.





**QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37408

WorkOrder: 0808108

Analyte	Extraction SW5030B			Spiked Sample ID: 0808138-003K								
	Sample µg/L	Spiked µg/L	MS % Rec.	MSD % Rec.	MS-MSD % RPD	LCS % Rec.	LCSD % Rec.	LCS-LCSD % RPD	Acceptance Criteria (%)			
tert-Amyl methyl ether (TAME)	ND	10	98.3	106	7.87	96.9	105	8.20	70 - 130	30	70 - 130	30
Benzene	ND	10	99.5	106	6.56	87	98.1	12.0	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	105	101	4.12	93.5	96.2	2.84	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	98.5	107	8.60	85.9	98.8	14.0	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	100	110	9.31	88.7	98	9.95	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	94.1	101	6.90	94.3	102	7.73	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	100	107	6.46	88.6	102	14.0	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	104	111	6.77	95.6	106	10.6	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	103	111	7.31	98.5	108	9.16	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	105	114	8.24	93.8	100	6.64	70 - 130	30	70 - 130	30
Toluene	ND	10	99.7	106	6.53	84.6	97.6	14.3	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	108	116	6.85	89.2	101	12.1	70 - 130	30	70 - 130	30
%SS1:	106	25	92	93	1.03	97	98	0.0768	70 - 130	30	70 - 130	30
%SS2:	107	25	99	99	0	99	100	0.718	70 - 130	30	70 - 130	30
%SS3:	114	25	94	95	1.39	96	95	0.420	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 37408 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808108-001C	08/04/08 3:00 PM	08/08/08	08/08/08 12:32 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37344

WorkOrder 0808108

EPA Method SW8015C		Extraction SW3510C							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	109	109	0	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	120	120	0	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 37344 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808108-001B	08/04/08 3:00 PM	08/05/08	08/06/08 6:35 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery =  $100 * (MS - Sample) / (Amount\ Spiked)$ ; RPD =  $100 * (MS - MSD) / ((MS + MSD) / 2)$ .

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR E200.8

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37405

WorkOrder 0808108

EPA Method E200.8		Extraction E200.8							Spiked Sample ID: 0808104-004			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Arsenic	2.6	10	96.7	95.9	0.653	94.4	98	3.73	70 - 130	20	80 - 120	20
Barium	28	100	93.4	93	0.331	91.8	92.3	0.619	70 - 130	20	80 - 120	20
Cadmium	ND	10	91.9	92	0.0435	94.2	94.4	0.159	70 - 130	20	80 - 120	20
Chromium	0.58	10	101	101	0	105	106	0.857	70 - 130	20	80 - 120	20
Copper	2.11	10	94.5	95.3	0.690	96.7	100	3.80	70 - 130	20	80 - 120	20
Lead	ND	10	92.2	90.5	1.79	89.4	91.3	2.14	70 - 130	20	80 - 120	20
Selenium	ND	10	90.8	91.7	0.995	92.7	95.7	3.21	70 - 130	20	80 - 120	20
%SS:	87	750	89	88	0.963	88	88	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 37405 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808108-001E	08/04/08 3:00 PM	08/05/08	08/09/08 10:00 AM	0808108-001E	08/04/08 3:00 PM	08/05/08	08/09/08 10:09 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**McC Campbell Analytical, Inc.**

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1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN, 235 Martin Luther King Jr Way,	Date Sampled: 08/20/08
		Date Received: 08/20/08
	Client Contact: Adrian Angel	Date Reported: 08/27/08
	Client P.O.:	Date Completed: 08/27/08

**WorkOrder: 0808586**

August 27, 2008

Dear Adrian:

Enclosed within are:

- 1) The results of the **1** analyzed sample from your project: **#270308; ALLEN, 235 Martin Luthe**
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.



# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

# CHAIN-OF-CUSTODY RECORD

**WorkOrder: 0808586**

**ClientCode: AEL**

WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

<b>Report to:</b>	Adrian Angel	Email: aangel@aeiconsultants.com	<b>Bill to:</b>	Denise Mockel	<b>Requested TAT:</b>	<b>5 days</b>
	AEI Consultants	cc:		AEI Consultants	<b>Date Received:</b>	<b>08/20/2008</b>
	2500 Camino Diablo, Ste. #200	PO:		2500 Camino Diablo, Ste. #200	<b>Date Printed:</b>	<b>08/21/2008</b>
	Walnut Creek, CA 94597	ProjectNo: #270308; ALLEN, 235 Martin Luther		Walnut Creek, CA 94597		
		King Jr Way,				
	(925) 283-6000    FAX (925) 283-6121			dmockel@aeiconsultants.com		

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0808586-001	MW-3	Water	8/20/2008 13:00	<input type="checkbox"/>	C	E	A	D	A	B						

**Test Legend:**

1	218_6_W	2	5-OXYS+PBSCV_W	3	G-MBTX_W	4	METALSMS DISS	5	PREFD REPORT
6	TPH(D)WSG_W	7		8		9		10	
11		12							

**Prepared by: Ana Venegas**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.



### Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **08/20/08 5:07:35 PM**  
Project Name: **#270308; ALLEN, 235 Martin Luther King Jr Way,** Checklist completed and reviewed by: **Ana Venegas**  
WorkOrder N°: **0808586** Matrix Water Carrier: Client Drop-In

#### Chain of Custody (COC) Information

Chain of custody present? Yes  No   
Chain of custody signed when relinquished and received? Yes  No   
Chain of custody agrees with sample labels? Yes  No   
Sample IDs noted by Client on COC? Yes  No   
Date and Time of collection noted by Client on COC? Yes  No   
Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes  No  NA   
Shipping container/cooler in good condition? Yes  No   
Samples in proper containers/bottles? Yes  No   
Sample containers intact? Yes  No   
Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes  No   
Container/Temp Blank temperature Cooler Temp: 5.4°C NA   
Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted   
Sample labels checked for correct preservation? Yes  No   
TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA   
Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted: Date contacted: Contacted by:

Comments: pH had to be adjusted for metals



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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN, 235 Martin Luther King Jr Way,	Date Sampled: 08/20/08
	Client Contact: Adrian Angel	Date Received: 08/20/08
	Client P.O.:	Date Analyzed: 08/20/08
		Date Extracted: 08/20/08

**Hexachrome by IC\***

Analytical Method: E218.6

Work Order: 0808586

Lab ID	Client ID	Matrix	Hexachrome	DF
0808586-001C	MW-3	W	54	20

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	0.2 µg/L
	S	NA

\* water samples are reported in µg/L.

N/A means surrogate not applicable to this analysis; # surrogate diluted out of range or surrogate coelutes with another peak.





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	Client Contact: Adrian Angel	Date Received: 08/20/08
	Client P.O.:	Date Extracted: 08/22/08
		Date Analyzed: 08/22/08

### 1,2-Dibromoethane; 1,2-Dichloroethane & Methyl-t-butyl ether by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0808586

Lab ID	0808586-001E				Reporting Limit for DF =1	
Client ID	MW-3					
Matrix	W					
DF	100					

Compound	Concentration				ug/kg	µg/L
1,2-Dibromoethane (EDB)	330				NA	0.5
1,2-Dichloroethane (1,2-DCA)	410				NA	0.5
Methyl-t-butyl ether (MTBE)	ND<50				NA	0.5

### Surrogate Recoveries (%)

%SS1:	87				
-------	----	--	--	--	--

Comments					
----------	--	--	--	--	--

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN, 235 Martin Luther King Jr Way,	Date Sampled: 08/20/08
	Client Contact: Adrian Angel	Date Received: 08/20/08
	Client P.O.:	Date Extracted: 08/22/08
		Date Analyzed 08/22/08

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0808586

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-3	W	120,000,d1	---	8900	18,000	930	12,000	50	103

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	μg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in μg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant



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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN, 235 Martin Luther King Jr Way,	Date Sampled: 08/20/08
	Client Contact: Adrian Angel	Date Received: 08/20/08
	Client P.O.:	Date Extracted: 08/20/08
		Date Analyzed 08/27/08

### Metals\*

Extraction Method: E200.8

Analytical Method: E200.8

Work Order: 0808586

Lab ID	0808586-001D				Reporting Limit for DF =1
Client ID	MW-3				
Matrix	Water				
DF	1				
Extraction Type	DISS.				S      W

Compound	Concentration				µg/kg	µg/L
Arsenic	77				NA	0.5
Barium	42				NA	5.0
Cadmium	ND				NA	0.25
Chromium	73				NA	0.5
Copper	21				NA	0.5
Iron	260				NA	20
Lead	34				NA	0.5
Selenium	9.6				NA	0.5

### Surrogate Recoveries (%)

%SS:	N/A				
------	-----	--	--	--	--

**Comments**

\*water samples are reported in µg/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

# means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

TOTAL = acid digestion.

WET = Waste Extraction Test (STLC).

DI WET = Waste Extraction Test using de-ionized water.



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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #270308; ALLEN, 235 Martin Luther King Jr Way,	Date Sampled: 08/20/08
	Client Contact: Adrian Angel	Date Received: 08/20/08
	Client P.O.:	Date Analyzed: 08/22/08
		Date Extracted: 08/20/08

## Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up\*

Extraction method SW3510C/3630C

Analytical methods: SW8015C

Work Order: 0808586

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0808586-001B	MW-3	W	6500,e4	5	100

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

e4) gasoline range compounds are significant.



**QC SUMMARY REPORT FOR E218.6**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37730

WorkOrder 0808586

EPA Method E218.6		Extraction E218.6							Spiked Sample ID: 0808586-001c			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Hexachrome	54	25	105	108	0.998	103	106	2.75	90 - 110	10	90 - 110	10

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 37730 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808586-001C	08/20/08 1:00 PM	08/20/08	08/20/08 8:48 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery =  $100 * (MS - Sample) / (Amount\ Spiked)$ ; RPD =  $100 * (MS - MSD) / ((MS + MSD) / 2)$ .

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37704

WorkOrder: 0808586

Analyte	Extraction SW5030B			Spiked Sample ID: 0808634-001A								
	Sample µg/L	Spiked µg/L	MS % Rec.	MSD % Rec.	MS-MSD % RPD	LCS % Rec.	LCSD % Rec.	LCS-LCSD % RPD	Acceptance Criteria (%)			
tert-Amyl methyl ether (TAME)	ND	10	109	112	2.67	110	112	1.21	70 - 130	30	70 - 130	30
Benzene	ND	10	101	104	2.64	111	113	2.27	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	101	103	2.38	109	110	0.168	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	111	113	1.84	107	109	2.26	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	95	98.9	4.02	118	119	0.379	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	95.2	99.6	4.51	118	120	1.55	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	104	107	2.66	127	128	1.32	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	108	112	3.03	109	109	0	70 - 130	30	70 - 130	30
Toluene	ND	10	105	108	2.05	104	106	1.60	70 - 130	30	70 - 130	30
%SS1:	97	25	94	93	1.28	97	97	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 37704 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808586-001E	08/20/08 1:00 PM	08/22/08	08/22/08 2:51 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37700

WorkOrder 0808586

EPA Method SW8021B/8015Cm		Extraction SW5030B							Spiked Sample ID: 0808547-003			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>£</sup>	ND	60	93.6	88.1	6.01	88.3	86.9	1.61	70 - 130	20	70 - 130	20
MTBE	ND	10	95	101	6.62	89.7	109	19.4	70 - 130	20	70 - 130	20
Benzene	ND	10	90.1	89.6	0.485	86.6	73.4	16.5	70 - 130	20	70 - 130	20
Toluene	ND	10	87.2	86.2	1.13	85.6	80.5	6.21	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	94.2	92.8	1.50	89.5	96.5	7.49	70 - 130	20	70 - 130	20
Xylenes	ND	30	106	103	2.37	100	107	6.57	70 - 130	20	70 - 130	20
%SS:	95	10	95	97	2.77	95	99	3.61	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 37700 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808586-001A	08/20/08 1:00 PM	08/22/08	08/22/08 10:32 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



### QC SUMMARY REPORT FOR E200.8

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37673

WorkOrder 0808586

EPA Method E200.8	Extraction E200.8								Spiked Sample ID: 0808504-003			
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Arsenic	59	10	NR	NR	NR	91.7	96	4.56	70 - 130	20	80 - 120	20
Barium	5600	100	NR	NR	NR	95.8	95.5	0.345	70 - 130	20	80 - 120	20
Cadmium	2.3	10	83.8	85.2	1.30	97.2	95.9	1.40	70 - 130	20	80 - 120	20
Chromium	1000	10	NR	NR	NR	102	103	1.25	70 - 130	20	80 - 120	20
Copper	610	10	NR	NR	NR	93.8	95.1	1.46	70 - 130	20	80 - 120	20
Iron	610,000	100	NR	NR	NR	112	113	0.267	70 - 130	20	70 - 130	20
Lead	140	10	NR	NR	NR	92.3	93	0.777	70 - 130	20	80 - 120	20
Selenium	1.6	10	113	108	3.78	98.7	94.4	4.41	70 - 130	20	80 - 120	20
%SS:	104	750	105	104	1.39	97	98	1.48	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 37673 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808586-001D	08/20/08 1:00 PM	08/20/08	08/27/08 10:15 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.





### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 37729

WorkOrder 0808586

EPA Method SW8015C		Extraction SW3510C/3630C							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	104	104	0	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	118	117	0.241	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 37729 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808586-001B	08/20/08 1:00 PM	08/20/08	08/22/08 9:18 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery =  $100 * (MS - Sample) / (Amount Spiked)$ ; RPD =  $100 * (MS - MSD) / ((MS + MSD) / 2)$ .

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 09/19/08
		Date Received: 09/19/08
	Client Contact: Adrian Angel	Date Reported: 09/26/08
	Client P.O.:	Date Completed: 09/24/08

**WorkOrder: 0809622**

September 26, 2008

Dear Adrian:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **#277915; Allen,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.

0809622

**McCAMPBELL ANALYTICAL INC.**

110 2<sup>nd</sup> AVENUE SOUTH, #D7  
PACHECO, CA 94553-5560

Telephone: (925) 798-1620

Fax: (925) 798-1622

**CHAIN OF CUSTODY RECORD**

**TURN AROUND TIME**

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required?  Yes  No

Email PDF Report: YES

Report To: Adrian Angel Bill To: Same  
Company: AEI Consultants  
2500 Camino Diablo, Suite 200  
Walnut Creek, CA 94597 E-Mail: aangel@aeiconsultants.com  
Tel: (925) 944-2899, extension 132 Fax: (925) 944-2895  
Project #: 277915 Project Name: ALLEN  
Project Location: *Martin Luther King Jr Oakland*  
Sampler Signature: *[Signature]*

Analysis Request Other Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX				METHOD PRESERVED				BTEX & TPH as Gas (602/8020 + 8015)	TPH as Diesel (8015) w/ silica gel cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	HVOCs EPA 8260 (8010 list)	BTEX ONLY (EPA 602 / 8020)	Pesticides EPA 608 / 8080	PCBs EPA 608 / 8080	VOCs EPA 624 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	Diss Hexachrome (E218.6)	Arsenic, Barium, Cadmium, Total Chromium, Copper, total Iron, Lead, Selenium (E200.8)	MTBE, EDB, and 1,2-DCA (8260)	TPH-g (TO-3) + MBTEX (TO-15)	2-propanol (TO-15)			
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>																				Other		
MW-3		9/19	1:15	9	ML Pouch	X					X	X																							
MW-2		9/19	12:15	4	"	X					X	X																							
MW-1		9/19	11:35	4	"	X					X	X																							

+1  
+1  
+

\* see attached

Relinquished By: *[Signature]* Date: 9/19 Time: 17:29 Received By: *[Signature]*  
Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_  
Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

ICE/yes 3.1<sup>oc</sup> PRESERVATION \_\_\_\_\_  
GOOD CONDITION ✓ APPROPRIATE CONTAINERS ✓  
HEAD SPACE ABSENT ✓ DECHLORINATED IN LAB ✓ PERSERVED IN LAB *NO*

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0809622

ClientCode: AEL

WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

Report to:	Adrian Angel	Email: aangel@aeiconsultants.com	Bill to:	Denise Mockel	Requested TAT: 5 days
	AEI Consultants	cc:		AEI Consultants	Date Received: 09/19/2008
	2500 Camino Diablo, Ste. #200	PO:		2500 Camino Diablo, Ste. #200	Date Printed: 09/22/2008
	Walnut Creek, CA 94597	ProjectNo: #277915; Allen		Walnut Creek, CA 94597	
	(925) 283-6000 FAX (925) 283-6121			dmockel@aeiconsultants.com	

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0809622-001	MW-3	Water	9/19/2008 13:15	<input type="checkbox"/>	E	C	B	D	D	A						
0809622-002	MW-2	Water	9/19/2008 12:15	<input type="checkbox"/>		C	B			A						
0809622-003	MW-1	Water	9/19/2008 11:35	<input type="checkbox"/>		C	B			A						

**Test Legend:**

1	218_6_W	2	8260VOC_W	3	G-MBTX_W	4	METALSMS DISS	5	PRDISSOLVED
6	TPH(D)WSG_W	7		8		9		10	
11		12							

Prepared by: Samantha Arbuckle

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



### Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **9/19/2008 8:21:33 PM**

Project Name: **#277915; Allen**

Checklist completed and reviewed by: **Samantha Arbuckle**

WorkOrder N°: **0809622** Matrix Water

Carrier: Client Drop-In

#### Chain of Custody (COC) Information

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes  No
- Container/Temp Blank temperature Cooler Temp: 3.1°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
- Sample labels checked for correct preservation? Yes  No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
- Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted:

Date contacted:

Contacted by:

Comments:



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Web: [www.mcccampbell.com](http://www.mcccampbell.com) E-mail: [main@mcccampbell.com](mailto:main@mcccampbell.com)  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 09/19/08
	Client Contact: Adrian Angel	Date Received: 09/19/08
	Client P.O.:	Date Extracted: 09/19/08
		Date Analyzed: 09/19/08

### Hexachrome by IC\*

Analytical Method: E218.6

Work Order: 0809622

Lab ID	Client ID	Matrix	Hexachrome	DF
0809622-001E	MW-3	W	5.0,b1	10

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	0.2 µg/L
	S	NA

\* water samples are reported in µg/L.  
 N/A means surrogate not applicable to this analysis; # surrogate diluted out of range or surrogate coelutes with another peak.  
 b1) aqueous sample that contains greater than ~1 vol. % sediment



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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 09/19/08
		Date Received: 09/19/08
	Client Contact: Adrian Angel	Date Extracted: 09/22/08
	Client P.O.:	Date Analyzed 09/22/08

### Volatile Organics by P&T and GC/MS\*

Extraction method SW5030B

Analytical methods SW8260B

Work Order: 0809622

Lab ID	Client ID	Matrix	1,2-Dibromoethane (EDB)	1,2-Dichloroethane (1,2-DCA)	Methyl-t-butyl ether (MTBE)	DF	% SS
001C	MW-3	W	160,b1	320	ND<17	33	92
002C	MW-2	W	ND,b1	ND	ND	1	98
003C	MW-1	W	ND	6.8	4.2	1	99

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	0.5	0.5	0.5	µg/L
	S	NA	NA	NA	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

b1) aqueous sample that contains greater than ~1 vol. % sediment



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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 09/19/08
		Date Received: 09/19/08
	Client Contact: Adrian Angel	Date Extracted: 09/22/08-09/23/08
	Client P.O.:	Date Analyzed 09/22/08-09/23/08

## Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0809622

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001B	MW-3	W	64,000,d1,b1	ND<500	6200	9200	660	6600	100	98
002B	MW-2	W	ND,b1	ND	ND	ND	ND	ND	1	95
003B	MW-1	W	ND	ND	ND	ND	ND	ND	1	95

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

b1) aqueous sample that contains greater than ~1 vol. % sediment  
d1) weakly modified or unmodified gasoline is significant





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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 09/19/08
		Date Received: 09/19/08
	Client Contact: Adrian Angel	Date Extracted: 09/19/08
	Client P.O.:	Date Analyzed 09/24/08

### Metals\*

Extraction Method: E200.8

Analytical Method: E200.8

Work Order: 0809622

Lab ID	0809622-001D				Reporting Limit for DF =1	
Client ID	MW-3					
Matrix	Water					
DF	10					
Extraction Type	DISS.					
					S	W

Compound	Concentration				µg/kg	µg/L
Arsenic	62				NA	0.5
Barium	ND<50				NA	5.0
Cadmium	ND<2.5				NA	0.25
Chromium	13				NA	0.5
Copper	19				NA	0.5
Iron	390				NA	20
Lead	28				NA	0.5
Selenium	5.8				NA	0.5

### Surrogate Recoveries (%)

%SS:	N/A			
Comments	a1,b1			

\*water samples are reported in µg/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

# means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

TOTAL = acid digestion.

WET = Waste Extraction Test (STLC).

DI WET = Waste Extraction Test using de-ionized water.

a1) sample diluted due to matrix interference

b1) aqueous sample that contains greater than ~1 vol. % sediment



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AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 09/19/08
		Date Received: 09/19/08
	Client Contact: Adrian Angel	Date Extracted: 09/22/08
	Client P.O.:	Date Analyzed 09/23/08

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up\*

Extraction method: SW3510C/3630C

Analytical methods: SW8015C

Work Order: 0809622

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0809622-001A	MW-3	W	4500,e4,b1	1	109
0809622-002A	MW-2	W	ND,b1	1	109
0809622-003A	MW-1	W	ND	1	111

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

b1) aqueous sample that contains greater than ~1 vol. % sediment  
e4) gasoline range compounds are significant.



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38311

WorkOrder: 0809622

EPA Method SW8260B	Extraction SW5030B								Spiked Sample ID: 0809593-004C			
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	102	104	1.55	102	105	2.84	70 - 130	30	70 - 130	30
Benzene	ND	10	106	105	1.18	108	108	0	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	96.9	105	7.94	96	100	4.57	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	95.5	96	0.486	99.6	102	1.91	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	97.8	101	3.09	102	107	3.92	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	107	108	0.733	109	111	2.18	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	82.8	81.2	2.00	87.4	87.1	0.322	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	111	110	1.06	102	103	1.76	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	118	117	0.717	115	116	1.11	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	106	106	0	104	107	2.63	70 - 130	30	70 - 130	30
Toluene	ND	10	106	104	1.80	98.1	98.8	0.780	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	100	98.2	1.87	112	111	0.336	70 - 130	30	70 - 130	30
%SS1:	94	25	100	100	0	91	92	1.23	70 - 130	30	70 - 130	30
%SS2:	94	25	98	98	0	94	94	0	70 - 130	30	70 - 130	30
%SS3:	102	2.5	118	112	5.48	97	97	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 38311 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809622-001C	09/19/08 1:15 PM	09/22/08	09/22/08 8:53 PM	0809622-002C	09/19/08 12:15 PM	09/22/08	09/22/08 6:00 PM
0809622-003C	09/19/08 11:35 AM	09/22/08	09/22/08 6:42 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



**QC SUMMARY REPORT FOR SW8021B/8015Cm**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38316

WorkOrder: 0809622

Analyte	EPA Method SW8021B/8015Cm		Extraction SW5030B						Spiked Sample ID: 0809543-001K			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	60	117	124	5.72	108	112	3.82	70 - 130	20	70 - 130	20
MTBE	ND	10	102	105	3.08	84.8	87.1	2.73	70 - 130	20	70 - 130	20
Benzene	ND	10	99.8	96.4	3.48	87.6	91.7	4.60	70 - 130	20	70 - 130	20
Toluene	ND	10	115	116	0.436	86.7	90.8	4.67	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	113	108	4.43	88.7	93.7	5.46	70 - 130	20	70 - 130	20
Xylenes	ND	30	123	113	8.04	89.2	91.9	2.94	70 - 130	20	70 - 130	20
%SS:	92	10	99	101	1.38	97	99	2.48	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 38316 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809622-002B	09/19/08 12:15 PM	09/23/08	09/23/08 3:39 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



### QC SUMMARY REPORT FOR E218.6

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38335

WorkOrder: 0809622

EPA Method E218.6		Extraction E218.6							Spiked Sample ID: 0809553-001b			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Hexachrome	ND	25	97.4	96.5	0.949	93.4	93.5	0.171	90 - 110	10	90 - 110	10

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 38335 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809622-001E	09/19/08 1:15 PM	09/19/08	09/19/08 9:46 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery =  $100 * (MS - Sample) / (Amount\ Spiked)$ ; RPD =  $100 * (MS - MSD) / ((MS + MSD) / 2)$ .

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**QC SUMMARY REPORT FOR SW8021B/8015Cm**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38362

WorkOrder: 0809622

EPA Method SW8021B/8015Cm		Extraction SW5030B							Spiked Sample ID: 0809595-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	60	109	106	3.39	99.5	101	1.31	70 - 130	20	70 - 130	20
MTBE	ND	10	90.9	94.8	4.17	106	103	2.75	70 - 130	20	70 - 130	20
Benzene	ND	10	97.9	97.5	0.448	99.5	100	1.01	70 - 130	20	70 - 130	20
Toluene	ND	10	99.9	99.5	0.390	99.7	101	1.11	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	102	98.4	3.11	105	107	1.96	70 - 130	20	70 - 130	20
Xylenes	ND	30	102	97.7	3.90	117	119	1.99	70 - 130	20	70 - 130	20
%SS:	95	10	109	112	2.57	94	95	0.511	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 38362 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809622-001B	09/19/08 1:15 PM	09/22/08	09/22/08 7:53 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



**QC SUMMARY REPORT FOR SW8021B/8015Cm**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38375

WorkOrder: 0809622

EPA Method SW8021B/8015Cm		Extraction SW5030B							Spiked Sample ID: 0809623-004A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	60	103	98	5.02	96.8	102	5.30	70 - 130	20	70 - 130	20
MTBE	ND	10	109	101	7.40	100	103	2.74	70 - 130	20	70 - 130	20
Benzene	ND	10	96.7	97.2	0.462	96	98.1	2.13	70 - 130	20	70 - 130	20
Toluene	ND	10	97.8	97.6	0.219	93.7	96.6	3.03	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	104	103	0.856	102	105	3.75	70 - 130	20	70 - 130	20
Xylenes	ND	30	116	114	1.24	113	118	3.61	70 - 130	20	70 - 130	20
%SS:	104	10	94	96	1.58	96	95	1.17	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 38375 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809622-003B	09/19/08 11:35 AM	09/23/08	09/23/08 3:05 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



**QC SUMMARY REPORT FOR E200.8**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38349

WorkOrder 0809622

EPA Method E200.8	Extraction E200.8								Spiked Sample ID: 0809588-001A			
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Arsenic	0.75	10	104	103	0.990	101	100	0.991	70 - 130	20	80 - 120	20
Barium	45	100	100	96.1	2.93	96.2	93.8	2.54	70 - 130	20	80 - 120	20
Cadmium	ND	10	104	99.5	4.26	101	98.8	1.82	70 - 130	20	80 - 120	20
Chromium	ND	10	111	110	1.50	109	110	0.641	70 - 130	20	80 - 120	20
Copper	320	10	NR	NR	NR	97.3	95.1	2.27	70 - 130	20	80 - 120	20
Iron	66	100	72.1	84.7	8.76	114	114	0	70 - 130	20	70 - 130	20
Lead	17	10	103	94.7	3.17	98.2	95.8	2.49	70 - 130	20	80 - 120	20
Selenium	ND	10	109	104	4.80	106	105	1.71	70 - 130	20	80 - 120	20
%SS:	96	750	97	95	2.30	94	91	3.12	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 38349 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809622-001D	09/19/08 1:15 PM	09/19/08	09/24/08 1:42 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.





### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38363

WorkOrder: 0809622

Analyte	EPA Method SW8015C			Extraction SW3510C/3630C					Spiked Sample ID: N/A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	89.6	90.7	1.16	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	83	84	1.78	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 38363 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809622-001A	09/19/08 1:15 PM	09/22/08	09/23/08 12:16 AM	0809622-002A	09/19/08 12:15 PM	09/22/08	09/23/08 1:25 AM
0809622-003A	09/19/08 11:35 AM	09/22/08	09/23/08 2:33 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.