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Mills College  
5000 MacArthur Blvd.  
Oakland, CA 94613  
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# MILLS

Ms. Barbara Jacob  
Alameda County Health Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

December 19, 2012

RE: **Soil and Groundwater Investigation**  
**Mills College**  
**5000 MacArthur Blvd.**  
**Oakland, California**

Dear Ms. Jacob,

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

Sincerely,



**Linda A. Zitzner**  
**AVP Facilities, Auxiliaries, and Campus Planning**  
**Off: 510-430-2024**  
**Fax: 510-430-2306**  
**[lzitzner@mills.edu](mailto:lzitzner@mills.edu)**



Ms. Barbara Jacob  
Alameda County Health Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

December, 19, 2012  
Project 411-01.01

**RE: Soil and Groundwater Investigation  
Mills College  
5000 MacArthur Boulevard  
Oakland, California**

Dear Ms. Jacob,

EquoLogic, on behalf of Mills College, has prepared the following soil and groundwater investigation report (**Figure 1**). The work is that presented in EquoLogic's work plan dated April 13, 2012.

#### **BACKGROUND**

Two underground fuel storage tanks (USTs) were formerly located at Mills College. In October 1988, a 1,000-gallon fuel UST was removed from the College maintenance yard (**Figure 2**). Strong gasoline odors were reported present in excavated soil. In order to define the vertical extent of contamination, the tank pit was extended to a depth of approximately 21 feet below grade. The soil at 21 feet still was reported to have a strong gasoline odor. Soil samples were collected from within the excavation to a depth of 21 feet below grade. Total petroleum hydrocarbons (TPH) ranged from 16,327 milligrams per kilogram (mg/kg) at 9 feet below grade to less than 10 mg/kg at 21 feet at the western end of the excavation.

Subsequently, three groundwater monitoring wells (MW-1 through MW-3, **Figure 2**) were installed adjacent to the former tank pit. TPH as gasoline (TPH-G) was reported in soil samples only from the boring for well MW-1. TPH-G was detected at concentrations ranging from 520 mg/kg at 11 feet to 15

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Barry Lane, Monte Sereno, California 95030

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mg/kg at 21 feet. Two additional borings (EB-1 and EB-2, **Figure 2**) were drilled adjacent to the former tank pit. TPH-G was reported only in the soil samples from boring EB-2. TPH-G was detected in the 16-foot sample from EB-2 at 1,200 mg/kg with benzene reported at 21.0 mg/kg. A soil analytical summary table by Kaldveer Associates is provided in **Attachment A**.

Wells MW-1 through MW-3 were last sampled in January 2000. TPH-G were only detected in the water sample from well MW-1 at 11.0 parts per million (ppm). Benzene was reported in the water samples from the three wells at 0.17, 0.7, and 0.0031 ppm, respectively.

In 1989, a small capacity, fuel oil UST was removed from the parking lot of the former Mills kitchen building. This area is now developed as an open lawn and landscaped area referred to as Toyon Meadow (currently Holmgren Meadows) (**Figure 3**). Soil samples from the base of the excavation (10 to 13 feet below grade) contained total petroleum hydrocarbons as diesel (TPH-D) at concentrations ranging from 260 mg/kg to 5,000 mg/kg. Soil samples were collected from eleven borings (B-1 through B-11, **Figure 3**) located west (downgradient) of the tank excavation. TPH-D was reported at a maximum concentration of 11,000 mg/kg at 14 feet below grade in boring B-8 (see table in **Attachment A**). Three groundwater monitoring wells were installed (MW-1 through MW-3, **Figure 3**). During the last monitoring event in 1995, wells contained a maximum concentration of 400 ppm TPH-D.

#### **HYROGEOLOGIC CONDITIONS**

Borings in the maintenance yard encountered approximately 5 feet of sandy clay and silty sand overlying weathered bedrock. Groundwater was first encountered in boring EB-2 at 25 feet below grade. Depth to groundwater in wells MW-1 through MW-3 in January 2000 was approximately 18 feet below top of casing. Groundwater flow was to the southwest.

Borings in Toyon Meadow encountered five to seven feet of fill material, underlain by clay to a depth of 10 to 13 feet below grade. Soil beneath the clay consisted of sand and gravel with lenses of clay to the maximum depth explored of 23.5 feet. Groundwater was encountered at a depth of 12 to 13 feet below grade and stabilized in monitoring wells at depths of 10 to 13 feet. Groundwater flow was to the west.

#### **SCOPE OF WORK**

The following section describes the work performed for this soil and groundwater investigation.

##### **Maintenance Yard**

**Task 1** – A boring (EB-3, **Figure 2**) was drill adjacent to former boring EB-2 (**Figure 2**) in order to define the current vertical extent of petroleum hydrocarbons in soil. A drilling permit was obtained from Alameda County Public Works prior to commencing field work (**Attachment B**). An underground utility

survey was performed prior to field work in order to avoid damage to any subsurface lines during soil borings. Hollow-stem drilling equipment was used to collect soil samples at depths of 5, 10, 15, 20, and 25, below ground surface (bgs). Auger refusal was found at 26.6 feet bgs. Samples were collected using a California modified split spoon sampler equipped with clean 6-inch brass liners. After sample collection, the liners containing the soil were sealed with Teflon sheets and tight-fitting plastic caps and placed on ice for transport to the laboratory.

The soil boring was logged by a California licensed geologist. The boring log is contained in **Attachment C**. The boring encountered weathered, fractured, bedrock (siltstone). A slight petroleum hydrocarbon odor was first noted in soil at a depth of approximately 15 feet bgs. A strong odor was noted at 17 feet bgs diminishing to no odor at 25 feet bgs. Groundwater was encountered at a depth of approximately 26 feet bgs. After collection of the soil samples, the boring was backfilled with cement grout. Soil cuttings were placed in a sealed 55-gallon drum for off-site disposal.

Soil samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), 1,2-dibromoethane, 1,2-dichloroethane, five fuel oxygenates including methyl tert-butyl ether (MTBE), naphthalene, and total petroleum hydrocarbons as gasoline (C6-10). Elevated petroleum hydrocarbons were detected in the soil sample from a depth of 20 feet bgs. Benzene was reported at 3,460 micrograms per kilogram (ug/kg)(parts per billion) along with naphthalene at 2,490 ug/kg. See a summary of soil analytical results on **Table 1**. Laboratory analytical reports are contained in **Attachment D**.

A groundwater sample could not be collected from boring EB-3 due to lack of water in the borehole.

**Task 2** –A groundwater sample was collected from wells MW-1 through MW-3 located adjacent to the former UST excavation. The wells were purged of three casing volumes prior to sampling with a clean Teflon baller. Water sampling field data sheets are contained in **Attachment E**. Depth to groundwater in wells ranged from 19.21 to 19.40 feet bgs. A flow direction to the west was calculated (see **Figure 4**). The water samples were decanted into 40 milliliter glass vials with chemical preservative. The groundwater samples were stored in an ice chest for shipment to a California certified laboratory.

Soil samples were analyzed BTEX, 1,2-Dibromoethane, 1,2-dichloroethane, five fuel oxygenates including MTBE, naphthalene, and total petroleum hydrocarbons as gasoline (C6-10). Petroleum hydrocarbons were detected only in well MW-1 at low concentrations (**Table 2**). TPH-G was reported at 0.036 milligrams per kilogram (mg/kg) (parts per million) and benzene at 1.7 ug/l. Naphthalene was reported at <0.50 ug/l. Laboratory analytical reports are contained in **Attachment D**.

**Task 3** – ACEHSA has requested information regarding a water supply well supposedly located near the corporation yard. EquoLogic has contacted the California Department of Water Resources (DWR) and requested well information for Mills College. Results will be submitted in a separate report.

#### **Toyon Meadow (Holgren Meadow)**

**Task 1** – Two soil borings (B-12 and B-13, **Figure 3**) were drilled to define the current vertical extent of petroleum hydrocarbons in soil and groundwater. Boring B-12 was drilled adjacent to the location of the former UST. Boring B-13 was drilled adjacent to former boring B-8 where the highest concentrations of petroleum hydrocarbons were previously detected in 1989. Borings were drilled to depths of approximately 29 feet and 22 feet, respectively, using direct push drilling equipment. Soil samples were collected at 5-foot depth intervals using a sampler equipped with 3-foot long acetate liners.

Borings encountered a mixture of clay, clayey sand, and clayey gravel. Boring logs are contained in **Attachment C**. Groundwater was encountered in boring B-12 at 17 feet and in boring B-13 at 11 feet bgs. Soil and groundwater was collected from both borings and analyzed for BTEX, 1,2-dibromoethane, 1,2-dichloroethane, five fuel oxygenates including MTBE, naphthalene, and total petroleum hydrocarbons as diesel (C10-28)(TPH-D). Elevated concentrations of naphthalene and TPH-D were reported for the 15-foot soil sample from boring B-13. Naphthalene was reported at 2,910 ug/kg and TPH-d at 1,400 mg/kg. Soil analytical data is summarized on **Table 1**. Laboratory analytical reports are contained in **Attachment D**. Benzene was below the method detection limit in groundwater samples from borings B-12 and B-13. Naphthalene was detected in the water sample from B-13 at 18 ug/l. TPH-D was detected at 9.46 ug/l in boring B-13.

**Task 2** - A groundwater sample were collected from wells MW-1 through MW-3 located in the area of Toyon/Holmgren Meadow. The wells were purged of three casing volumes prior to sampling with a clean Teflon bailer. Field sampling data sheets are contained in **Attachment E**. Depth to groundwater in wells ranged from 10.83 to 13.75 feet bgs. A flow direction to the north was calculated (see **Figure 5**). The groundwater samples were stored in an ice chest for shipment to a California certified laboratory. Groundwater samples were analyzed for BTEX, 1,2-dibromoethane, 1,2-dichloroethane, five fuel oxygenates including MTBE, naphthalene, and total petroleum hydrocarbons as diesel (C10-28)(TPH-D).

Petroleum hydrocarbons were only detected in well MW-1. TPH-D was detected at the very low concentrations of 0.115 mg/kg. Groundwater analytical data is summarized on **Table 2**. Laboratory analytical reports are contained in **Attachment D**.

## CONCLUSIONS AND RECOMMENDATIONS

EquoLogic presents the following conclusions and recommendations;

- Residual petroleum hydrocarbons remain near the top of the saturated zone in both study areas.
- Concentrations of residual soil petroleum hydrocarbons have significantly been reduced from previous historic highs.
- Residual petroleum hydrocarbons in soil are currently having a minimal impact on groundwater quality in the area of the maintenance yard and Holmgren Meadow. EquoLogic recommends an additional groundwater event in April when water levels are anticipated to be higher and interaction with residual petroleum hydrocarbons is possible.
- Impacts from any soil vapors in Toyon/Holmgren Meadow are deemed to be minimal due to the open landscaped area. Table 1 of the *Low Threat Underground Storage Tank Closure Policy* indicates that soil containing less than 8.2 mg/kg benzene and 45 mg/kg naphthalene in the 5- to 10-foot depth interval poses no significant threat to human health. The maximum benzene and naphthalene concentrations in the 5- to 10-foot depth interval of borings B-12 and B-13 were below the method reporting level.
- Borings EB-2 and EB-3 are located within approximately 15 feet of the maintenance yard building consisting of a warehouse and small office adjacent to the borings. The building is constructed of metal on concrete slab. In the warehouse, open construction, air circulation through doors and windows, mitigate any accumulation of soil vapors.
- Soil vapor risks are also considered be minimal in the small office due to depth to residual petroleum hydrocarbons (bioattenuation zone), small impact area, and generally fine grained soil (silt). The depth to soil impact zones was approximately 15 to 20 feet bgs. Benzene and naphthalene were below the method detection limit in the 5- and 10-foot samples. The maximum TPH-G concentration in the 0 to 10-foot depth interval was 7.8 mg/kg.
- EquoLogic recommends evaluation of low risk case closure pending the results of the April 2013 groundwater sampling event.

## LIMITATIONS

The descriptions, conclusions, and recommendations contained in this report represent EquoLogic's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by

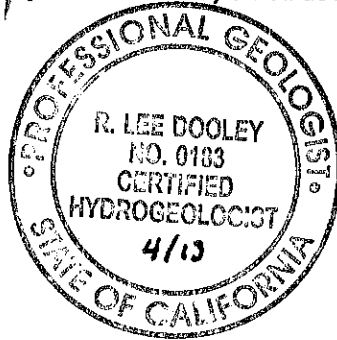
EquoLogic, the data from those reports is used "as is" and is assumed to be accurate. This report is based upon a specific scope of work requested by the client. The Contract between EquoLogic and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were conducted. This report is intended only for the use of EquoLogic's Client and anyone else specifically listed on this report. EquoLogic will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, EquoLogic makes no express or implied warranty as to the contents of this report.

You can contact me at (408) 656-2505 or by email at ldooley@equologicgroup.com.

Sincerely,



Lee Dooley  
Senior Hydrogeologist  
CHG 183



#### Attachments

Table 1 – Summary of Soil Analytical Data

Table 2 – Summary of Groundwater Analytical Data

Figure 1 – Site Location Map

Figure 2 – Site Plan of Corporation Yard

Figure 3 – Site Plan of Toyon/Holmgren Meadow

Figure 4 – Groundwater Elevation Contours, Maintenance Yard

Figure 5 – Groundwater Elevation Contours, Toyon/Holmgren Meadow

Attachment A – Historic Soil Analytical Data

Attachment B – Drilling Permit

Attachment C – Boring Logs

Attachment D – Laboratory Analytical Reports

Attachment E – Water Sampling Field Data Sheets

**Cc: Linda Zitzner, Mills College, 5000 MacArthur Blvd., Oakland, CA 94613-1301**

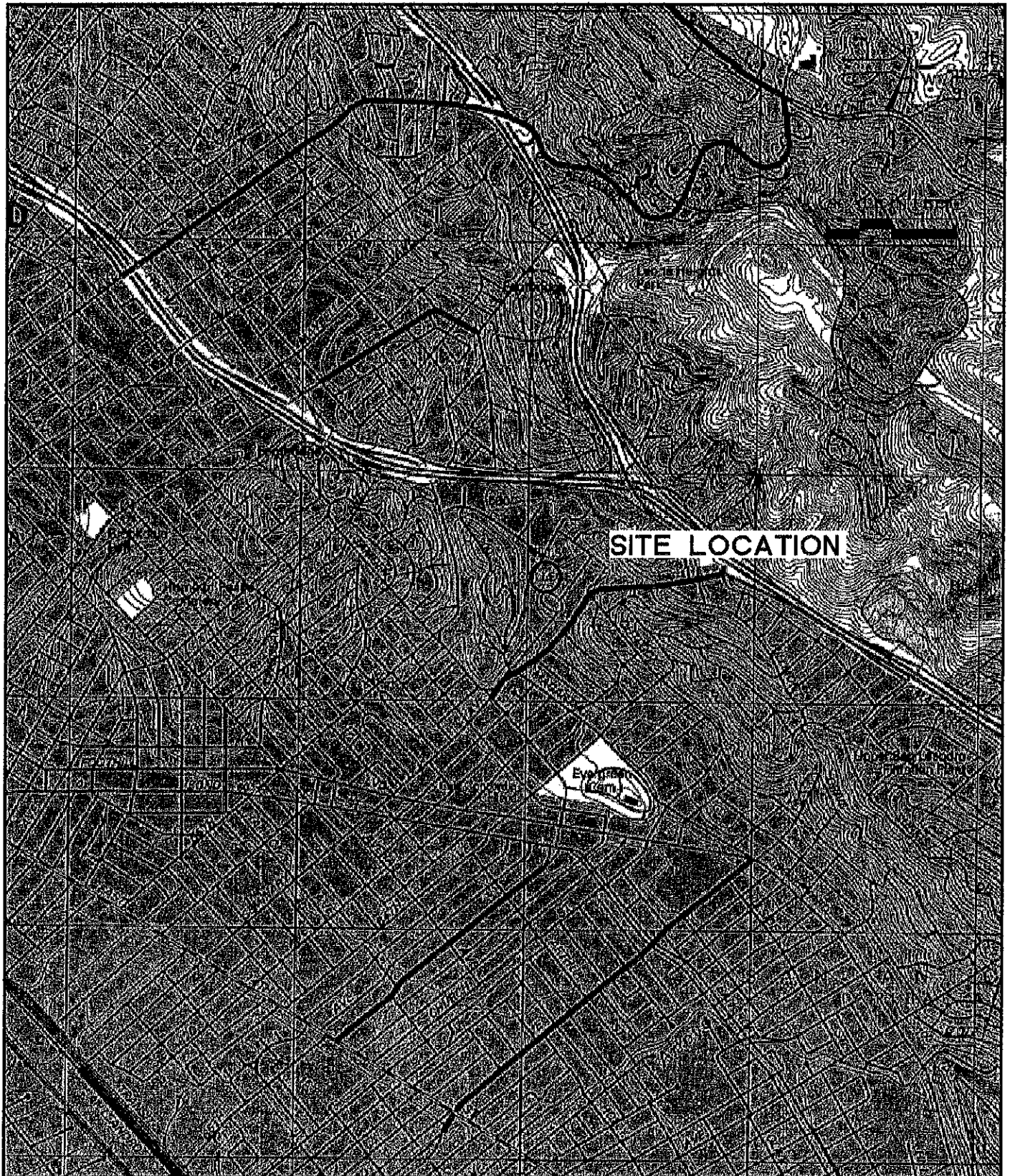
TABLE 1 - SUMMARY OF SOIL ANALYTICAL DATA  
MILLS COLLEGE

Boring	Depth Feet	Date	B ug/kg	T ug/kg	E ug/kg	X ug/kg	1,2-Dibrm ug/kg	1,2-Dichlorm ug/kg	DIPE ug/kg	ETBE ug/kg	MTBE ug/kg	Napth ug/kg	TAME ug/kg	TBA ug/kg	TPH (C10-28) mg/kg
<b>TOYON MEADOWS</b>															
B-12	5	11/8/2012	<0.49	1.5	<0.49	1.0	<0.49	<0.49	<0.49	<0.49	<0.98	<0.98	<0.49	<0.98	<2.5
B-12	10	11/8/2012	<0.49	0.62	<0.49	<0.98	<0.49	<0.49	<0.49	<0.49	<0.98	<0.98	<0.49	<9.8	3.17
B-12	15	11/8/2012	<0.48	0.55	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	5.12
B-12	20	11/8/2012	<0.48	<0.48	<0.48	<0.96	<0.48	<0.48	<0.48	<0.48	<0.96	<0.96	<0.48	<9.6	3.6
B-12	25	11/8/2012	<0.48	<0.48	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	9.3
B-12	29	11/8/2012	<0.48	1.5	<0.48	1.7	<0.48	<0.48	<0.48	<0.48	<0.96	<0.96	<0.48	<9.7	3.01
B-13	5	11/8/2012	<0.50	<0.50	<0.50	<0.99	<0.50	<0.50	<0.50	<0.50	<0.99	<0.99	<0.50	<9.6	4.02
B-13	10	11/8/2012	<0.49	1.5	<0.49	3.1	<0.49	<0.49	<0.49	<0.49	<0.97	<0.97	<0.49	<9.7	7.8
B-13	15	11/8/2012	<170	<170	<170	<340	<170	<170	<170	<170	<340	2910	<170	<3400	1400
B-13	20	11/8/2012	<0.48	<0.48	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	2.85
B-13	22	11/8/2012	<0.49	<0.49	<0.49	<0.98	<0.49	<0.49	<0.49	<0.49	<0.98	2.2	<0.49	<9.8	3.51
<b>MAINTENANCE YARD</b>															
															TPH (C6-10)
EB-3	6	10/22/2012	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<10.0	<0.050
EB-3	10	10/22/2012	<0.48	<0.48	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	<0.048
EB-3	15	10/22/2012	10.3	<0.50	2.7	5.7	<0.50	<0.50	<0.50	<0.50	<1.0	28.8	<180	27.7	129
EB-3	20	10/22/2012	3460	837	5390	24,800	<180	<180	<180	<180	<350	2490	<180	<3500	352
EB-3	25	10/22/2012	193	27.1	182	659	<19	<19	<19	<19	<37	65.3	<19	<370	10
<b>Notes</b>															
B	Benzene						DIPE	Di-isoproply ether		TPH (C10-28)		Total Petroleum Hydrocarbons			
T	Toluene						ETBE	Ethyl tert-Butly Ether							
E	Ethylbenzene						MTBE	Methyl Tert Butyl Ether							Elevated concentrations
X	Xylene						Napth	Napthalene							
1,2-Dibrm	1,2-Dibromoethane						TAME	Tert-Amyl Methyl Ether							
1,2-Dichlorm	1,2-Dichloroethane						TBA	Tert Butyl Alcohol							



TABLE 2 - SUMMARY OF GROUNDWATER ANALYTICAL DATA  
MILLS COLLEGE

Boring	Date	B ug/l	T ug/l	E ug/l	X ug/l	1,2-Dibrm ug/l	1,2-Dichlorm ug/l	DIPE ug/l	ETBE ug/l	MTBE ug/l	Naph ug/l	TAME ug/l	TBA ug/l	TPH (C10-28) mg/l
<b>TOYON MEADOWS</b>														
MW-1 M	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	<b>0.0333</b>
MW-2 M	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	<b>0.115</b>
MW-3 M	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	<b>0.0904</b>
B-12	11/8/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	<b>0.0837</b>
B-13	11/8/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<b>18</b>	<0.40	<2.4	<b>9.46</b>
<b>MAINTENANCE YARD</b>														TPH (C6-10)
MW-1	10/19/2012	<b>1.7</b>	<0.20	<b>0.21</b>	<0.46	<0.20	<b>0.56</b>	<0.22	<0.22	<b>0.32</b>	<0.50	<0.40	<2.4	<b>0.036</b>
MW-2	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	10.9	<0.025
MW-3	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	0.20	<0.50	<0.40	<2.4	<0.025
<b>Notes</b>														
B	Benzene					DIPE	Di-isoproply ether			TPH (C10-28)				Total Petroleum Hydrocarbons
T	Toluene					ETBE	Ethyl tert-Butly Ether							
E	Ethylbenzene					MTBE	Methyl Tert Butyl Ether							
X	Xylene					Naph	Napthalene							
1,2-Dibrm	1,2-Dibromoethane					TAME	Tert-Amyl Methyl Ether							
1,2-Dichlorm	1,2-Dichloroethane					TBA	Tert Butyl Alcohol							



Ref. EquoLogic/4110101-SLA.DWG



**EquoLogic**

**SITE LOCATION MAP**

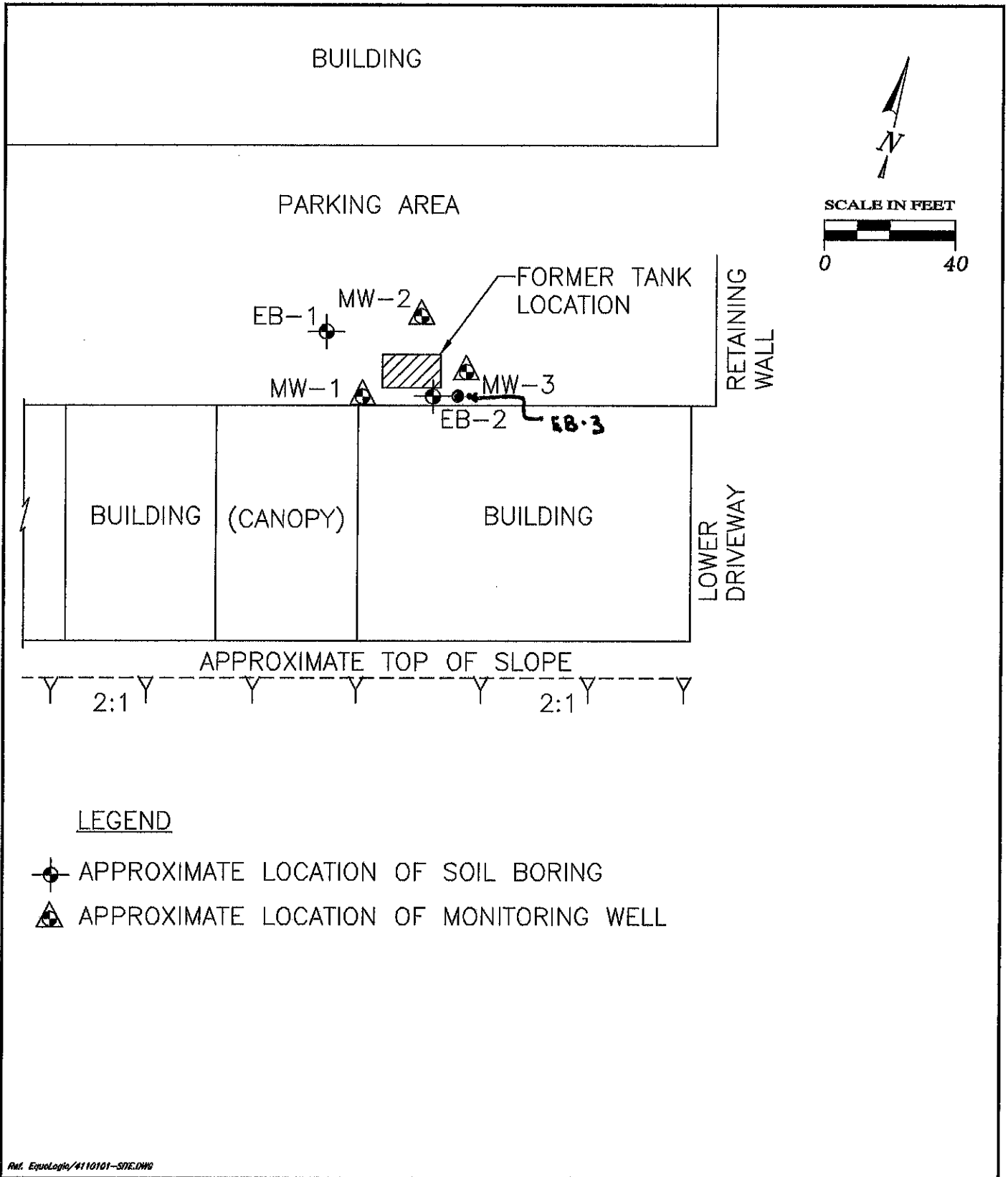
**MILLS COLLEGE**  
5000 MacArthur Boulevard  
Oakland, California

FIGURE:

**1**

PROJECT:


411.01.01

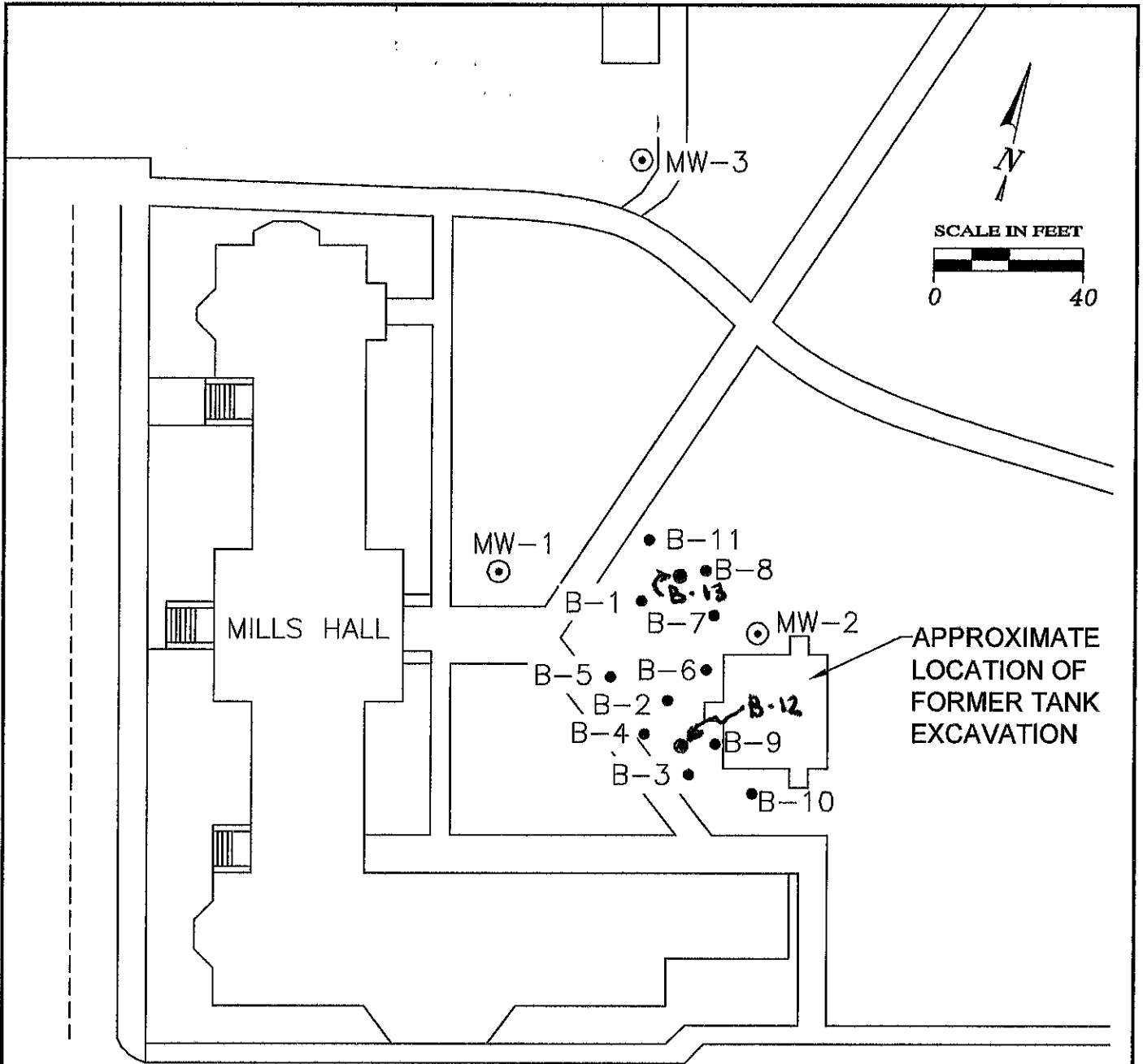


LEGEND

- ⊕ APPROXIMATE LOCATION OF SOIL BORING
- △ APPROXIMATE LOCATION OF MONITORING WELL

Ref. EquoLogic/4110101-SITE.DWG


 <b>EquoLogic</b>	<b>SITE PLAN CORPORATION YARD</b>	FIGURE: <b>2</b>
	<b>MILLS COLLEGE</b> 5000 MacArthur Boulevard Oakland, California	PROJECT: 411.01.01

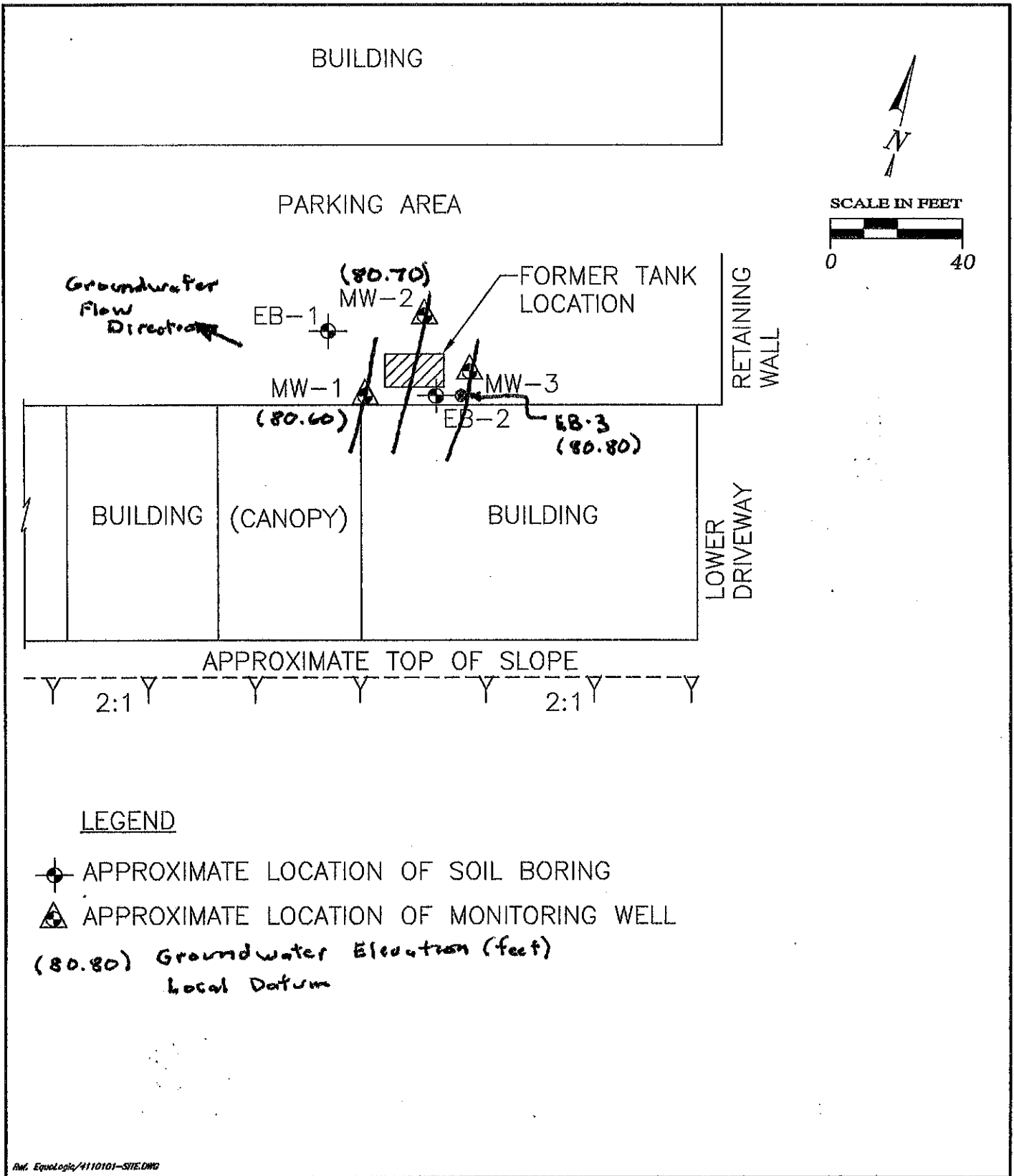


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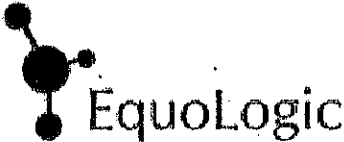
- B-2 • APPROXIMATE LOCATION OF EXPLORATORY BORING
- MW-2 ⊙ APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL

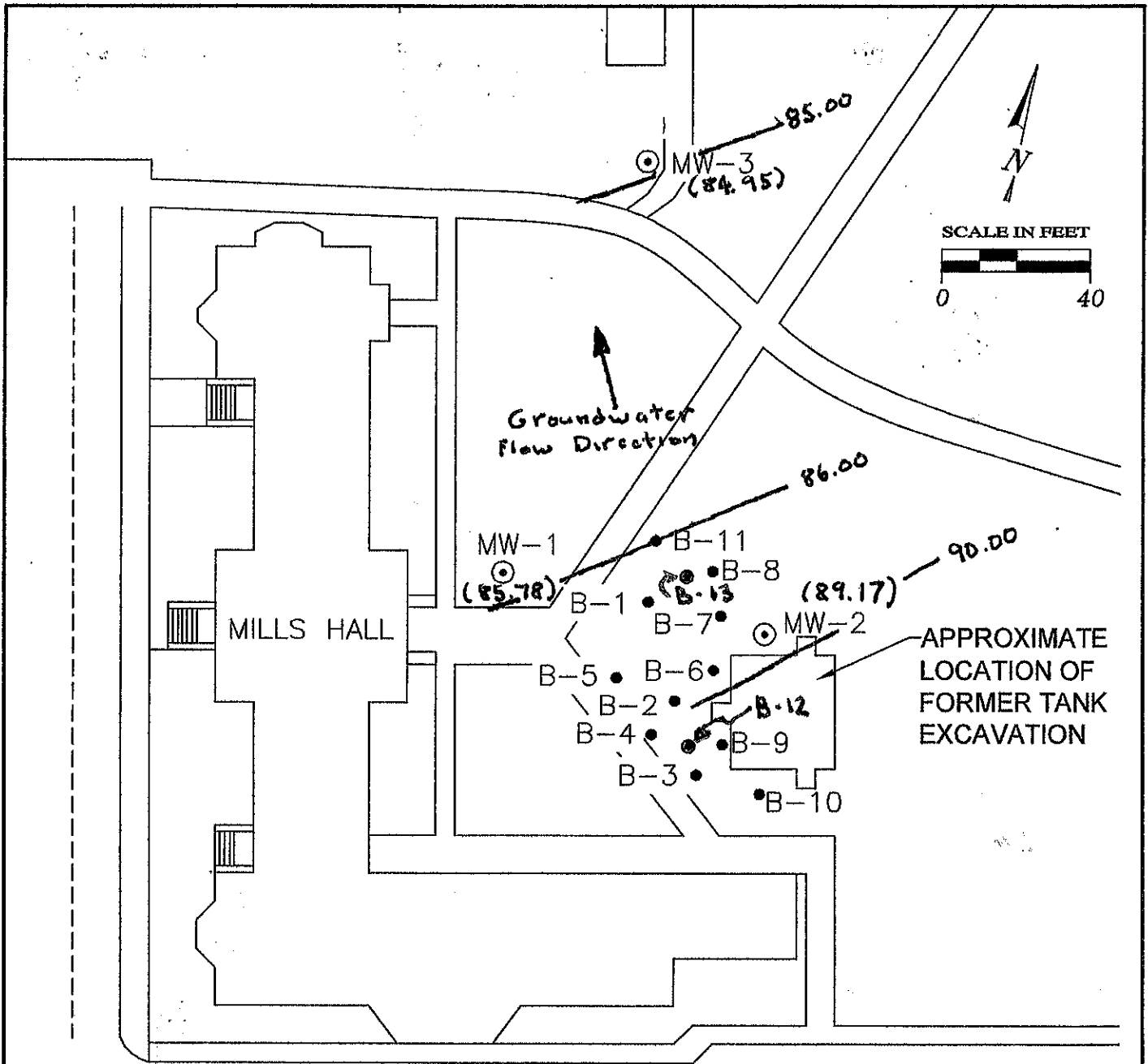
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 <b>EquoLogic</b>	<b>SITE PLAN TOYON MEADOWS</b>	<b>FIGURE:</b> <b>3</b> <b>PROJECT:</b> <b>411.01.01</b>
	<b>MILLS COLLEGE</b> 5000 MacArthur Boulevard Oakland, California	



Rev. EquoLogic/4110101-SITE.DWG

	<p>Groundwater Elevation Contours...</p>	<p>FIGURE: 4</p>
	<p>Mills College 5000 MacArthur Boulevard Oakland, California</p>	<p>PROJECT: 411.01.01</p>



**LEGEND**

- B-2 • APPROXIMATE LOCATION OF EXPLORATORY BORING
- MW-2 ⊙ APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL

WETMORE ROAD

(85.78) Groundwater Elevation (feet)  
Local Datum

Ref. EquoLogic/H110101-SITE.DWG



**EquoLogic**

*Groundwater Elevation Contours*

**MILLS COLLEGE**  
5000 MacArthur Boulevard  
Oakland, California

FIGURE:

**5**

PROJECT:  
411.01.01

**ATTACHMENT A**  
**Historic Soil Analytical Data**

## Toyon Meadows

TABLE 1  
ANALYTICAL RESULTS - SOIL  
 (reported in parts per million, mg/kg)

Sample Location  
Number, and Collection Date      Petroleum Hydrocarbons as Diesel

June 28, 1989 - Initial Excavation Limit Samples

SS-1, SS-2	480
SS-3, SS-4	1,900

July 17, 1989 - Soil Boring Samples

B1-10'	190
B1-14'	1,600
B2-10'	ND
B2-13.5'	1,800
B3-10'	ND
B3-14'	60
B4-14.5'	1,700
B5-13.5'	640
B6-14'	630
B7-10'	240
B7-14.5'	240
B8-14'	11,000
B9-13'	250
B10-14.5'	2,700
B11-14'	16

July 18, 19, 1989 - Additional Excavation Closure Samples

CS1-10'	ND
CS2-13'	5,000
CS3-10'	ND
CS4-12'	260
CS5-10'	ND
CS6-13'	570
CS7-10'	ND
CS8-12'	1,600

August 4 - 7, 1989 - City Sewer Trench Samples, South of Mills Hall

SS-1, 20'	ND
SS-2, 20'	ND

June 4, 1991 - Soil Samples Collected During Installation of MHW-2 and MHW-3

MHW-2, 12.5'	620
MHW-3, 11'	ND



## Maintenance Yard

TABLE 2

ANALYTICAL RESULTS - SOIL  
(reported in parts per million, mg/kg)

Sample Location & Depth(ft)	TPH					
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	
MW1-11	520.0	0.78	2.8	2.4	14.0	
MW1-16	1.0	0.3	0.11	0.007	0.045	
MW1-21	15.0	1.6	2.3	0.26	1.6	
MW2-11	ND	0.002	0.002	ND	ND	
MW2-16	ND	0.001	0.001	ND	ND	
MW2-21	ND	ND	0.001	ND	ND	
MW3-11	ND	0.015	0.001	ND	ND	
MW3-16	ND	0.051	0.002	ND	0.005	
MW3-21	ND	ND	ND	ND	ND	
EB1-10.5	ND	0.005	0.002	ND	ND	
EB1-15.5	ND	0.075	0.003	ND	ND	
EB1-24	ND	0.003	0.002	ND	ND	
EB2-11	580.0	7.6	50.0	13.0	72.0	
EB2-16	1200.0	21.0	74.0	23.0	190.0	
EB2-21	240.0	0.3	5.6	3.1	18.0	

Notes:

TPH = Total Petroleum Hydrocarbons

ND = Not Detected; see laboratory reports for specific detection limits.

**ATTACHMENT B**

**Drilling Permit**

# Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 10/11/2012 By vickyh1

Permit Numbers: W2012-0747  
Permits Valid from 10/19/2012 to 10/19/2012

Application Id: 1349804814764  
Site Location: 5000 MacArthur Blvd, Oakland, CA - Mills College  
Project Start Date: 10/19/2012  
Assigned Inspector: Contact James Yoo at (510) 670-6633 or jamesy@acpwa.org

City of Project Site:Oakland

Completion Date:10/19/2012

Applicant: EquoLogic - Lee Dooley  
15936 Barry Ln, Monte Sereho, CA 95030  
Property Owner: Mills College Linda Zitzner  
5000 MacArthur, Oakland, CA 94613  
Client: \*\* same as Property Owner \*\*

Phone: 408-679-7166

Phone: 510-430-2024

Receipt Number: WR2012-0341  
Payer Name : EquoLogic Group

Total Due: \$265.00  
Total Amount Paid: \$265.00  
Paid By: CHECK PAID IN FULL

## Works Requesting Permits:

Borehole(s) for Investigation-Geotechnical Study/CPT's - 3 Boreholes

Driller: Vironex [Exploration Geoservices c57-484288] - Lic #: 705927 - Method:  
other

Work Total: \$265.00

### Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2012-0747	10/11/2012	01/17/2013	3	8.00 in.	30.00 ft

### Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
5. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or

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

waterways or be allowed to move off the property where work is being completed.

6. Cuttings may also be left on site or spread out as long as the applicants has approval from the property owner and the cuttings will not violate the State and County Clean Water laws (NPDES).

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

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

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

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**ATTACHMENT C**

**Boring Logs**

# B-13

MILLS COLLEGE, OAKLAND, CA

Project Number	411.01.01	Drill Rig	Direct push
Geologist	Lee Dooley	Ground Elevation	Feet
Date Drilled	11/9/2012	Total Depth of Borehole	22 Feet
Borehole Diameter	2 Inches	Depth to Water	11 Feet

Graphic Log	Description	Depth	Sample	PID	TPH-D (mg/kg)	Benzene (ug/kg)	Completion
GC	Brown sandy clayey GRAVEL - angular up to 1/2", moist	5	█	1.2	4.02	<0.50	
GC	Gray-green clayey GRAVEL - wet at 11 feet, strong product odor	10	█	7.5	7.08	<0.49	
GC	Brown clayey GRAVEL - no product odor; refusal at 22 feet	15	█	57	1400	<170	
GC	Brown clayey GRAVEL - no product odor; refusal at 22 feet	20	█		2.85	<0.48	
		25	█		3.51	<0.49	
		30					
		35					

C:\Program Files (x86)\Pompoise Media\Well Logger\Legends\Mills College.wl2

# B-12

MILLS COLLEGE, OAKLAND, CA

Project Number 411.01.01	Drill Rig Direct Push
Geologist Lee Dooley	Ground Elevation Feet
Date Drilled 11/9/2012	Total Depth of Borehole 29 Feet
Borehole Diameter 2 Inches	Depth to Water 17 Feet

Graphic Log	Description	Depth	Sample	PID	TPH-D (mg/kg)	Benzene (ug/kg)	Completion
CL	Dark brown sandy CLAY (fill) - damp, brick and wood fragments						
CL	Tan and gray mottled CLAY with roots - damp; product odor at approximately 15 feet	5	█		<2.5	<0.49	
CL		10	█		3.17	<0.49	
CL		15	█		5.12	<0.48	
SC	Brown clayey medium to coarse SAND - moist to wet, no product odor	20	█		3.60	<0.48	
SC		25	█	1.6	9.30	<0.48	
GC	Brown clayey GRAVEL - rock fragments up to 1", angular, damp, no product odor; drilling refusal at 29 feet.	30	█	1.2	3.01	<0.48	
		35					

C:\Program Files (x86)\Porpoise Media\Well Loggers\Legend\Mills College.wf2

# EB-3

MILLS COLLEGE, OAKLAND, CA

Project Number	411.01.01	Drill Rig	Hollow stem auger
Geologist	Lee Dooley	Ground Elevation	Feet
Date Drilled	10/22/2012	Total Depth of Borehole	26.5 Feet
Borehole Diameter	8 Inches	Depth to Water	26 Feet

Graphic Log	Description	Depth	Sample	PID	TPH-D (mg/kg)	Benzene (ug/kg)	Completion
<p><b>Asphalt</b></p> <p><b>Siltstone</b></p>	<p><b>Asphalt</b></p> <p>Light brown to tan weathered bedrock - siltstone/sandstone; trace product odor at 15 feet, gray green color; strong product odor at 17 feet; mottled, product odor at 20 feet, very slow drilling; no odor at 25 feet; trace of water at 26 feet; auger refusal at 26.5 feet</p>	<p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>35</p>	<p>0.0</p> <p>1.9</p> <p>185</p> <p>170</p>	<p>&lt;0.050</p> <p>&lt;0.048</p> <p>0.129</p> <p>352</p> <p>10.3</p>	<p>&lt;0.50</p> <p>&lt;0.48</p> <p>10.3</p> <p>3460</p> <p>193</p>		

C:\Program Files (x86)\Pompoise\_Media\Well\_Logs\EB-3\Mills College.wrl2



**ATTACHMENT D**

**Laboratory Analytical Reports**



11/01/12

Technical Report for

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**EquoLogic**

Mills College - 5000 MacArthur Blvd., Oakland, CA  
121019-CK1

Accutest Job Number: C24325

Sampling Date: 10/19/12

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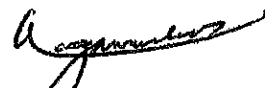
Report to:

EquoLogic  
15936 Barry Lane  
Monte Sereno, CA 95030  
lidooley@equologicgroup.com  
  
ATTN: Lee Dooley

Total number of pages in report: 26



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

  
Kesavalu M. Bagawandoss,  
Ph.D., J.D., Lab Director

Client Service contact: Nutan Kabir 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

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### Sample Summary

EquoLogic

Job No: C24325

Mills College - 5000 MacArthur Blvd., Oakland, CA  
Project No: 121019-CK1

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
C24325-1	10/19/12	10:00	BTS	10/19/12	AQ Ground Water	MW-1
C24325-2	10/19/12	09:40	BTS	10/19/12	AQ Ground Water	MW-2
C24325-3	10/19/12	09:00	BTS	10/19/12	AQ Ground Water	MW-3
C24325-4	10/19/12	10:55	BTS	10/19/12	AQ Ground Water	MW-1M
C24325-5	10/19/12	12:05	BTS	10/19/12	AQ Ground Water	MW-2M
C24325-6	10/19/12	11:25	BTS	10/19/12	AQ Ground Water	MW-3M

## Summary of Hits

Job Number: C24325  
Account: EquoLogic  
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA  
Collected: 10/19/12

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C24325-1	MW-1					
Benzene		1.7	1.0	0.20	ug/l	SW846 8260B
Ethylbenzene		0.21 J	1.0	0.20	ug/l	SW846 8260B
1,2-Dichloroethane		0.56 J	1.0	0.20	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.32 J	1.0	0.20	ug/l	SW846 8260B
TPH-GRO (C6-C10)		36.0 J	50	25	ug/l	SW846 8260B
C24325-2	MW-2					
Tert-Butyl Alcohol		10.9	10	2.4	ug/l	SW846 8260B
C24325-3	MW-3					
Methyl Tert Butyl Ether		0.20 J	1.0	0.20	ug/l	SW846 8260B
C24325-4	MW-1M					
TPH (C10-C28)		0.0333 J	0.097	0.024	mg/l	SW846 8015B M
C24325-5	MW-2M					
TPH (C10-C28)		0.115	0.095	0.024	mg/l	SW846 8015B M
C24325-6	MW-3M					
TPH (C10-C28)		0.0904 J	0.095	0.024	mg/l	SW846 8015B M



**Sample Results**

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**Report of Analysis**

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## Report of Analysis

<b>Client Sample ID:</b> MW-1	<b>Date Sampled:</b> 10/19/12
<b>Lab Sample ID:</b> C24325-1	<b>Date Received:</b> 10/19/12
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B	
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W34767.D	1	10/24/12	KN	n/a	n/a	VW1209
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1.7	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	0.21	1.0	0.20	ug/l	J
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	0.56	1.0	0.20	ug/l	J
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.32	1.0	0.20	ug/l	J
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	36.0	50	25	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		60-130%
2037-26-5	Toluene-D8	93%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b> MW-2		<b>Date Sampled:</b> 10/19/12
<b>Lab Sample ID:</b> C24325-2		<b>Date Received:</b> 10/19/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W34768.D	1	10/24/12	KN	n/a	n/a	VW1209
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	10.9	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		60-130%
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

MDL - Method Detection Limit  
 J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> MW-3		<b>Date Sampled:</b> 10/19/12
<b>Lab Sample ID:</b> C24325-3		<b>Date Received:</b> 10/19/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W34769.D	1	10/24/12	KN	n/a	n/a	VW1209
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.20	1.0	0.20	ug/l	J
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		60-130%
2037-26-5	Toluene-D8	92%		60-130%
460-00-4	4-Bromofluorobenzene	96%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1M	Date Sampled:	10/19/12
Lab Sample ID:	C24325-4	Date Received:	10/19/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W34770.D	1	10/24/12	KN	n/a	n/a	VW1209
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	95%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b> MW-1M		<b>Date Sampled:</b> 10/19/12
<b>Lab Sample ID:</b> C24325-4		<b>Date Received:</b> 10/19/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH027299.D	1	10/23/12	JH	10/23/12	OP6897	GHH840
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0333	0.097	0.024	mg/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	72%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

<b>Client Sample ID:</b> MW-2M		<b>Date Sampled:</b> 10/19/12
<b>Lab Sample ID:</b> C24325-5		<b>Date Received:</b> 10/19/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W34771.D	1	10/24/12	KN	n/a	n/a	VW1209
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	94%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2M	Date Sampled:	10/19/12
Lab Sample ID:	C24325-5	Date Received:	10/19/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8015B M SW846 3510C		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH027300.D	1	10/23/12	JH	10/23/12	OP6897	GHH840
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.115	0.095	0.024	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	67%		45-140%		

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b> MW-3M		<b>Date Sampled:</b> 10/19/12
<b>Lab Sample ID:</b> C24325-6		<b>Date Received:</b> 10/19/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W34772.D	1	10/24/12	KN	n/a	n/a	VW1209
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	92%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3M		<b>Date Sampled:</b> 10/19/12
<b>Lab Sample ID:</b> C24325-6		<b>Date Received:</b> 10/19/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH027301.D	1	10/23/12	JH	10/23/12	OP6897	GHH840
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

**TPH Extractable w/ Silica Gel Cleanup**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0904	0.095	0.024	mg/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	74%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



**Misc. Forms**

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**Custody Documents and Other Forms**

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**Includes the following where applicable:**

- Chain of Custody







# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C24325 Client: BLAINE TECH Project: EQUOLOGIC

Date / Time Received: 10/19/2012 Delivery Method: Client Airbill #s: \_\_\_\_\_

Cooler Temps (Initial/Adjusted): #1: (3.7/2.7): 0

### Cooler Security

- |                           |  |                       |  |
|---------------------------|--|-----------------------|--|
|                           | <u>Y or N</u>  |                       | <u>Y or N</u>  |
| 1. Custody Seals Present: | <input type="checkbox"/> <input checked="" type="checkbox"/> | 3. COC Present:       | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 2. Custody Seals Intact:  | <input type="checkbox"/> <input type="checkbox"/>            | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> <input type="checkbox"/> |

### Cooler Temperature

- |                              |  |
|------------------------------|--|
|                              | <u>Y or N</u>  |
| 1. Temp criteria achieved:   | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 2. Cooler temp verification: | <u>IR Gun</u>  |
| 3. Cooler media:             | <u>Ice (Bag)</u>   |
| 4. No. Coolers:              | <u>1</u>   |

### Quality Control Preservation

- |                                 |                                     |                                     |                          |            |
|---------------------------------|-------------------------------------|-------------------------------------|--------------------------|------------|
|                                 | <u>Y</u>                            | <u>or</u>                           | <u>N</u>                 | <u>N/A</u> |
| 1. Trip Blank present / cooler: | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |            |
| 2. Trip Blank listed on COC:    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |            |
| 3. Samples preserved properly:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                          |            |
| 4. VOCs headspace free:         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |            |

### Sample Integrity - Documentation

- |  |                                     |                          |          |
|--|-------------------------------------|--------------------------|----------|
|  | <u>Y</u>                            | <u>or</u>                | <u>N</u> |
| 1. Sample labels present on bottles:   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |          |
| 2. Container labeling complete:        | <input checked="" type="checkbox"/> | <input type="checkbox"/> |          |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |          |

### Sample Integrity - Condition

- |                                  |                                     |                          |          |
|----------------------------------|-------------------------------------|--------------------------|----------|
|                                  | <u>Y</u>                            | <u>or</u>                | <u>N</u> |
| 1. Sample recvd within HT:       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |          |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |          |
| 3. Condition of sample:          | <u>Intact</u>                       |                          |          |

### Sample Integrity - Instructions

- |  |                                     |                                     |          |                                     |
|--|-------------------------------------|-------------------------------------|----------|-------------------------------------|
|  | <u>Y</u>                            | <u>or</u>                           | <u>N</u> | <u>N/A</u>                          |
| 1. Analysis requested is clear:            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |          |                                     |
| 2. Bottles received for unspecified tests: | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |          |                                     |
| 3. Sufficient volume recvd for analysis:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |          |                                     |
| 4. Compositing instructions clear:         | <input type="checkbox"/>            | <input type="checkbox"/>            |          | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear:           | <input type="checkbox"/>            | <input type="checkbox"/>            |          | <input checked="" type="checkbox"/> |

Comments

Accutest Laboratories  
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2105 Lundy Avenue  
F: 408.588.0201

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www.accutest.com

**GC/MS Volatiles**

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**QC Data Summaries**

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**Includes the following where applicable:**

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary**

Job Number: C24325  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1209-MB	W34758.D	1	10/24/12	KN	n/a	n/a	VW1209

The QC reported here applies to the following samples:

Method: SW846 8260B

C24325-1, C24325-2, C24325-3, C24325-4, C24325-5, C24325-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	60-130%
2037-26-5	Toluene-D8	97%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24325  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1209-BS	W34755.D	1	10/24/12	KN	n/a	n/a	VW1209
VW1209-BSD	W34756.D	1	10/24/12	KN	n/a	n/a	VW1209

The QC reported here applies to the following samples:

Method: SW846 8260B

C24325-1, C24325-2, C24325-3, C24325-4, C24325-5, C24325-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	21.4	107	21.3	107	0	60-130/30
106-93-4	1,2-Dibromoethane	20	20.3	102	20.4	102	0	60-130/30
107-06-2	1,2-Dichloroethane	20	20.2	101	19.7	99	3	60-130/30
108-20-3	Di-Isopropyl ether	20	20.6	103	21.1	106	2	60-130/30
100-41-4	Ethylbenzene	20	20.2	101	19.3	97	5	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	22.3	112	22.4	112	0	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	21.4	107	21.4	107	0	60-130/30
91-20-3	Naphthalene	20	21.3	107	21.7	109	2	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	21.0	105	21.2	106	1	60-130/30
75-65-0	Tert-Butyl Alcohol	100	102	102	103	103	1	60-130/30
108-88-3	Toluene	20	19.9	100	19.5	98	2	60-130/30
1330-20-7	Xylene (total)	60	61.3	102	59.2	99	3	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	94%	60-130%
2037-26-5	Toluene-D8	94%	92%	60-130%
460-00-4	4-Bromofluorobenzene	99%	97%	60-130%

\* = Outside of Control Limits.

5.2.1  
**5**

# Laboratory Control Sample Summary

Job Number: C24325  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1209-LCS	W34757.D	1	10/24/12	KN	n/a	n/a	VW1209

The QC reported here applies to the following samples:

Method: SW846 8260B

C24325-1, C24325-2, C24325-3, C24325-4, C24325-5, C24325-6

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	132	106	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	97%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

\* = Outside of Control Limits.

**Matrix Spike/Matrix Spike Duplicate Summary**

Job Number: C24325  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C24336-1MS	W34776.D	1	10/24/12	KN	n/a	n/a	VW1209
C24336-1MSD	W34777.D	1	10/24/12	KN	n/a	n/a	VW1209
C24336-1	W34761.D	1	10/24/12	KN	n/a	n/a	VW1209

The QC reported here applies to the following samples:

Method: SW846 8260B

C24325-1, C24325-2, C24325-3, C24325-4, C24325-5, C24325-6

CAS No.	Compound	C24336-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.0 U	20	20.5	103	20.1	101	2	60-130/25
106-93-4	1,2-Dibromoethane	1.0 U	20	20.3	102	19.2	96	6	60-130/25
107-06-2	1,2-Dichloroethane	1.0 U	20	21.7	109	19.6	98	10	60-130/25
108-20-3	Di-Isopropyl ether	2.0 U	20	20.0	100	20.4	102	2	60-130/25
100-41-4	Ethylbenzene	1.0 U	20	19.0	95	18.4	92	3	60-130/25
637-92-3	Ethyl Tert Butyl Ether	2.0 U	20	22.9	115	22.3	112	3	60-130/25
1634-04-4	Methyl Tert Butyl Ether	1.0 U	20	21.8	109	21.1	106	3	60-130/25
91-20-3	Naphthalene	5.0 U	20	20.6	103	20.2	101	2	60-130/25
994-05-8	Tert-Amyl Methyl Ether	2.0 U	20	21.6	108	21.2	106	2	60-130/25
75-65-0	Tert-Butyl Alcohol	10 U	100	88.4	88	84.3	84	5	60-130/25
108-88-3	Toluene	1.0 U	20	19.0	95	18.5	93	3	60-130/25
1330-20-7	Xylene (total)	2.0 U	60	58.2	97	56.6	94	3	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C24336-1	Limits
1868-53-7	Dibromofluoromethane	100%	98%	100%	60-130%
2037-26-5	Toluene-D8	92%	92%	94%	60-130%
460-00-4	4-Bromofluorobenzene	102%	99%	101%	60-130%

\* = Outside of Control Limits.

**GC Semi-volatiles**

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**QC Data Summaries**

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**Includes the following where applicable:**

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



# Method Blank Summary

Job Number: C24325  
Account: EQUOCAMS EquoLogic  
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6897-MB	HH027296.D1		10/23/12	JH	10/23/12	OP6897	GHH840

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24325-4, C24325-5, C24325-6

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.10	0.025	mg/l	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	76%	45-140%

# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24325  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6897-BS	HH027297.D1		10/23/12	JH	10/23/12	OP6897	GHH840
OP6897-BSD	HH027298.D1		10/23/12	JH	10/23/12	OP6897	GHH840

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24325-4, C24325-5, C24325-6

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.660	66	0.693	69	5	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	81%	80%	45-140%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C24325  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6897-MS	HH027326.D1		10/24/12	JH	10/23/12	OP6897	GHH840
OP6897-MSD	HH027327.D1		10/24/12	JH	10/23/12	OP6897	GHH840
C24346-1	HH027302.D1		10/23/12	JH	10/23/12	OP6897	GHH840

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24325-4, C24325-5, C24325-6

CAS No.	Compound	C24346-1 mg/l	Spike Q	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	0.0285	J 2	1.56	77	1.52	75	3	45-140/25

CAS No.	Surrogate Recoveries	MS	MSD	C24346-1	Limits
630-01-3	Hexacosane	93%	87%	84%	45-140%

\* = Outside of Control Limits.



11/05/12

**Technical Report for**

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**EquoLogic**

Mills College - 5000 MacArthur Blvd., Oakland, CA

411-01.01

Accutest Job Number: C24374

Sampling Date: 10/22/12

---

**Report to:**

EquoLogic  
15936 Barry Lane  
Monte Sereno, CA 95030  
ldooley@equologicgroup.com

ATTN: Lee Dooley

Total number of pages in report: 18



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

**Kesavalu M. Bagawandoss,  
Ph.D., J.D., Lab Director**

**Client Service contact: Nutan Kabir 408-588-0200**

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

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Test results relate only to samples analyzed.

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### Sample Summary

EquoLogic

Job No: C24374

Mills College - 5000 MacArthur Blvd., Oakland, CA  
Project No: 411-01.01

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
C24374-1	10/22/12	12:15 LD	10/22/12	SO	Soil	EB-3@6'
C24374-2	10/22/12	12:35 LD	10/22/12	SO	Soil	EB-3@10'
C24374-3	10/22/12	13:00 LD	10/22/12	SO	Soil	EB-3@15'
C24374-4	10/22/12	13:30 LD	10/22/12	SO	Soil	EB-3@20'
C24374-5	10/22/12	14:15 LD	10/22/12	SO	Soil	EB-3@25'

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

# Summary of Hits

Job Number: C24374  
Account: EquoLogic  
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA  
Collected: 10/22/12

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

C24374-1 EB-3@6'

No hits reported in this sample.

C24374-2 EB-3@10'

No hits reported in this sample.

C24374-3 EB-3@15'

Benzene	10.3	5.0	0.50	ug/kg	SW846 8260B
Ethylbenzene	2.7 J	5.0	0.50	ug/kg	SW846 8260B
Xylene (total)	5.7 J	10	1.0	ug/kg	SW846 8260B
Naphthalene	28.8	5.0	1.0	ug/kg	SW846 8260B
Tert Butyl Alcohol	27.7 J	40	10	ug/kg	SW846 8260B
TPH-GRO (C6-C10)	129	100	50	ug/kg	SW846 8260B

C24374-4 EB-3@20'

Benzene	3460	1800	180	ug/kg	SW846 8260B
Toluene	837 J	1800	180	ug/kg	SW846 8260B
Ethylbenzene	5390	1800	180	ug/kg	SW846 8260B
Xylene (total)	24800	3500	350	ug/kg	SW846 8260B
Naphthalene	2490	1800	350	ug/kg	SW846 8260B
TPH-GRO (C6-C10)	352000	35000	18000	ug/kg	SW846 8260B

C24374-5 EB-3@25'

Benzene	193	190	19	ug/kg	SW846 8260B
Toluene	27.1 J	190	19	ug/kg	SW846 8260B
Ethylbenzene	182 J	190	19	ug/kg	SW846 8260B
Xylene (total)	659	370	37	ug/kg	SW846 8260B
Naphthalene	65.3 J	190	37	ug/kg	SW846 8260B
TPH-GRO (C6-C10)	10300	3700	1900	ug/kg	SW846 8260B



**Sample Results**

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**Report of Analysis**

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## Report of Analysis

Client Sample ID:	EB-3@6'	Date Sampled:	10/22/12
Lab Sample ID:	C24374-1	Date Received:	10/22/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L20479.D	1	10/24/12	XB	n/a	n/a	VL647
Run #2							

Run #	Initial Weight
Run #1	5.02 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> EB-3@10'		
<b>Lab Sample ID:</b> C24374-2		
<b>Matrix:</b> SO - Soil	<b>Date Sampled:</b> 10/22/12	
<b>Method:</b> SW846 8260B	<b>Date Received:</b> 10/22/12	
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA	<b>Percent Solids:</b> n/a <sup>a</sup>	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L20478.D	1	10/24/12	XB	n/a	n/a	VL647
Run #2							

Run #	Initial Weight
Run #1	5.17 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.8	0.48	ug/kg	
108-88-3	Toluene	ND	4.8	0.48	ug/kg	
100-41-4	Ethylbenzene	ND	4.8	0.48	ug/kg	
1330-20-7	Xylene (total)	ND	9.7	0.97	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.8	0.48	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.8	0.48	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.8	0.48	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.8	0.48	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.8	0.97	ug/kg	
91-20-3	Naphthalene	ND	4.8	0.97	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.8	0.48	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.7	ug/kg	
	TPH-GRO (C6-C10)	ND	97	48	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	EB-3@15'	Date Sampled:	10/22/12
Lab Sample ID:	C24374-3	Date Received:	10/22/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L20480.D	1	10/24/12	XB	n/a	n/a	VL647
Run #2							

Run #	Initial Weight
Run #1	5.02 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	10.3	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	2.7	5.0	0.50	ug/kg	J
1330-20-7	Xylene (total)	5.7	10	1.0	ug/kg	J
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	28.8	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	27.7	40	10	ug/kg	J
	TPH-GRO (C6-C10)	129	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	105%		60-130%
460-00-4	4-Bromofluorobenzene	103%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	EB-3@20'	Date Sampled:	10/22/12
Lab Sample ID:	C24374-4	Date Received:	10/22/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L20486.D	1	10/24/12	XB	n/a	n/a	VL647
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	7.12 g	5.0 ml	10.0 ul
Run #2			

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3460	1800	180	ug/kg	
108-88-3	Toluene	837	1800	180	ug/kg	J
100-41-4	Ethylbenzene	5390	1800	180	ug/kg	
1330-20-7	Xylene (total)	24800	3500	350	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1800	180	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1800	180	ug/kg	
108-20-3	Di-Isopropyl ether	ND	1800	180	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	1800	180	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1800	350	ug/kg	
91-20-3	Naphthalene	2490	1800	350	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	1800	180	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	14000	3500	ug/kg	
	TPH-GRO (C6-C10)	352000	35000	18000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	106%		60-130%
460-00-4	4-Bromofluorobenzene	102%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	EB-3@25'	Date Sampled:	10/22/12
Lab Sample ID:	C24374-5	Date Received:	10/22/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L20487.D	1	10/24/12	XB	n/a	n/a	VL647
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.74 g	5.0 ml	100 ul
Run #2			

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	193	190	19	ug/kg	
108-88-3	Toluene	27.1	190	19	ug/kg	J
100-41-4	Ethylbenzene	182	190	19	ug/kg	J
1330-20-7	Xylene (total)	659	370	37	ug/kg	
106-93-4	1,2-Dibromoethane	ND	190	19	ug/kg	
107-06-2	1,2-Dichloroethane	ND	190	19	ug/kg	
108-20-3	Di-Isopropyl ether	ND	190	19	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	190	19	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	190	37	ug/kg	
91-20-3	Naphthalene	65.3	190	37	ug/kg	J
994-05-8	Tert-Amyl Methyl Ether	ND	190	19	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	1500	370	ug/kg	
	TPH-CRO (C6-C10)	10300	3700	1900	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



**Misc. Forms**

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**Custody Documents and Other Forms**

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**Includes the following where applicable:**

- Chain of Custody



# ACCUTEST

LABORATORIES

## CHAIN OF CUSTODY

2108 Lundy Ave, San Jose, CA 95131  
 (408) 588-0200 FAX: (408) 588-0201

EDU000AMS4745

FEE-EX Tracking #	Ballie Order Control #
Accutest Quote #	Accutest NC Job #: C24374

Client / Reporting Information		Project Information		Requested Analytes										Matrix Codes																								
Company Name: <b>EquoLogic</b>		Project Name: <b>Mills College</b>		<table border="1"> <tr> <td>TPH-S</td> <td>STEX</td> <td>5-DIG</td> <td>EDB</td> <td>EDC</td> <td>Naphthalene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										TPH-S	STEX	5-DIG	EDB	EDC	Naphthalene							X	X	X	X	X	X							W/W- Wastewater GW- Ground Water SW- Surface Water SO- Soil OI-OI WP-W/PO LIQ- Non-aqueous Liquid AIR DWI- Drinking Water (For Analysis Only)
TPH-S	STEX	5-DIG	EDB											EDC	Naphthalene																							
X	X	X	X											X	X																							
Address: <b>15936 Barry Lane</b>		Street: <b>5200 MacArthur Blvd.</b>																																				
City: <b>Monte Sereno CA 95030</b>		City: <b>Oakland CA</b>																																				
Project Contact: <b>Lee Dooley</b>		Project #: <b>4.11-01.01</b>																																				
Phone #: <b>408 656-2505</b>		EMAIL: <b>ldooley@equologicgroup.com</b>																																				
Sampler's Name: <b>Lee D.</b>		Client Purchase Order:																																				
Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection		Number of preserved Bottles										LAB USE ONLY																								
		Date	Time	Sampled by	Matrix	# of bottles	1	2	3	4	5	6	7		8	9	10																					
-1	EB-3 @ 6'	10/23/11	12:15	LD	S	1																																
-2	EB-3 @ 10'	10/23/11	12:35	LD	S	1																																
-3	EB-3 @ 15'		12:00	LD	S	1																																
-4	EB-3 @ 20'		13:30	LD	S	1																																
-5	EB-3 @ 25'		14:15	LD	S	1																																

Turnaround Time (Business days)	Approved By/ Date:	Data Deliverable Information	Comments / Remarks
<input checked="" type="checkbox"/> 10 Day <input type="checkbox"/> 8 Day <input type="checkbox"/> 5 Day (125% markup) <input type="checkbox"/> 2 Day (150% markup) <input type="checkbox"/> 1 Day (200% markup) <input type="checkbox"/> Same Day (300% markup)		<input type="checkbox"/> Commercial "A" - Results only <input checked="" type="checkbox"/> Commercial "B" - Results with QC summaries <input type="checkbox"/> Commercial "B+" - Results, QC, and chromatograms <input type="checkbox"/> FULL1 - Level 4 data package <input checked="" type="checkbox"/> EDF for GeoTracker <input type="checkbox"/> EDD Format Provide EDF Global ID _____ Provide EDF Logcode: _____	

Emergency T/A data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by: <b>Lee Dooley</b>	Date/Time: <b>10/23/11 12:15</b>	Received By: <b>[Signature]</b>	Date/Time: _____	Relinquished By: _____	Date/Time: _____	Received By: _____
Relinquished by: _____	Date/Time: _____	Received By: _____	Date/Time: _____	Relinquished By: _____	Date/Time: _____	Received By: _____
Relinquished by: _____	Date/Time: _____	Received By: _____	Date/Time: _____	Relinquished By: _____	Date/Time: _____	Received By: _____
Relinquished by: _____	Date/Time: _____	Received By: _____	Date/Time: _____	Relinquished By: _____	Date/Time: _____	Received By: _____
Relinquished by: _____	Date/Time: _____	Received By: _____	Date/Time: _____	Relinquished By: _____	Date/Time: _____	Received By: _____

Custody Seal # \_\_\_\_\_ Appropriate Bottle / Pres.  Headspace Y/N  On Ice  Cooler Temp. \_\_\_\_\_  
 Labels match Count  N Separation Receiving Check List used  Y / N  54°C \_\_\_\_\_



## Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** C24374      **Client:** EQUOLOGIC      **Project:** MILLS COLLEGE  
**Date / Time Received:** 10/22/2012      **Delivery Method:** Client      **Airbill #'s:** \_\_\_\_\_  
**Cooler Temps (Initial/Adjusted):** #1: (5.4/5.4); 0

<u>Cooler Security</u>		<u>Y</u>	<u>or</u>	<u>N</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>			3. COC Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Custody Seals Intact:	<input type="checkbox"/>	<input type="checkbox"/>			4. Smpt Dates/Time OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<u>Cooler Temperature</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2. Cooler temp verification:	IR Gun			
3. Cooler media:	Ice (Bag)			
4. No. Coolers:	1			

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2. Trip Blank listed on COC:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4. VOCs headspace free:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Sample Integrity - Documentation</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2. Container labeling complete:	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

<u>Sample Integrity - Condition</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2. All containers accounted for:	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3. Condition of sample:	Intact			

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

Accutest Laboratories  
V: 408.688.0200

2105 Lundy Avenue  
P: 408.688.0201

San Jose, CA 95131  
www.accutest.com

**C24374: Chain of Custody**  
**Page 2 of 2**





**GC/MS Volatiles**

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**QC Data Summaries**

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**Includes the following where applicable:**

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

Job Number: C24374  
Account: EQUOCAMS EquoLogic  
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL647-MB	L20470.D	1	10/24/12	XB	n/a	n/a	VL647

The QC reported here applies to the following samples:

Method: SW846 8260B

C24374-1, C24374-2, C24374-3, C24374-4, C24374-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	101% 60-130%
2037-26-5	Toluene-D8	107% 60-130%
460-00-4	4-Bromofluorobenzene	99% 60-130%

# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24374  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL647-BS	L20467.D	1	10/24/12	XB	n/a	n/a	VL647
VL647-BSD	L20468.D	1	10/24/12	XB	n/a	n/a	VL647

The QC reported here applies to the following samples:

Method: SW846 8260B

C24374-1, C24374-2, C24374-3, C24374-4, C24374-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	40.5	101	38.9	97	4	60-130/30
106-93-4	1,2-Dibromoethane	40	40.1	100	39.5	99	2	60-130/30
107-06-2	1,2-Dichloroethane	40	37.5	94	37.0	93	1	60-130/30
108-20-3	Di-Isopropyl ether	40	45.2	113	45.0	113	0	60-130/30
100-41-4	Ethylbenzene	40	40.0	100	38.3	96	4	60-130/30
637-92-3	Ethyl tert-Butyl Ether	40	41.0	103	41.2	103	0	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	39.3	98	39.4	99	0	60-130/30
91-20-3	Naphthalene	40	39.9	100	39.5	99	1	60-130/30
994-05-8	Tert-Amyl Methyl Ether	40	40.2	101	40.3	101	0	60-130/30
75-65-0	Tert Butyl Alcohol	200	204	102	209	105	2	60-130/30
108-88-3	Toluene	40	39.6	99	38.7	97	2	60-130/30
1330-20-7	Xylene (total)	120	122	102	116	97	5	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	102%	60-130%
2037-26-5	Toluene-D8	103%	102%	60-130%
460-00-4	4-Bromofluorobenzene	98%	99%	60-130%

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

Job Number: C24374  
Account: EQUOCAMS EquoLogic  
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL647-LCS	L20469.D	1	10/24/12	XB	n/a	n/a	VL647

The QC reported here applies to the following samples:

Method: SW846 8260B

C24374-1, C24374-2, C24374-3, C24374-4, C24374-5

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	293	117	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	60-130%
2037-26-5	Toluene-D8	105%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C24374  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C24331-5MS	L20481.D	1	10/24/12	XB	n/a	n/a	VL647
C24331-5MSD	L20482.D	1	10/24/12	XB	n/a	n/a	VL647
C24331-5	L20475.D	1	10/24/12	XB	n/a	n/a	VL647

The QC reported here applies to the following samples:

Method: SW846 8260B

C24374-1, C24374-2, C24374-3, C24374-4, C24374-5

CAS No.	Compound	C24331-5 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		40	37.6	94	40.9	103	8	60-130/30
106-93-4	1,2-Dibromoethane	ND		40	40.6	102	45.6	115	12	60-130/30
107-06-2	1,2-Dichloroethane	ND		40	38.1	95	41.0	104	7	60-130/30
108-20-3	Di-Isopropyl ether	ND		40	43.1	108	45.7	116	6	60-130/30
100-41-4	Ethylbenzene	ND		40	35.5	89	38.5	97	8	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND		40	45.6	114	47.8	121	5	60-130/30
1634-04-4	Methyl Tert Butyl Ether	3.8	J	40	46.8	108	48.8	114	4	60-130/30
91-20-3	Naphthalene	ND		40	44.1	110	46.9	119	6	60-130/30
994-05-8	Tert-Amyl Methyl Ether	ND		40	43.8	110	46.6	118	6	60-130/30
75-65-0	Tert Butyl Alcohol	ND		200	246	123	274	139* a	11	60-130/30
108-88-3	Toluene	ND		40	36.5	91	39.8	101	9	60-130/30
1330-20-7	Xylene (total)	ND		120	108	90	117	99	8	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C24331-5	Limits
1868-53-7	Dibromofluoromethane	102%	103%	102%	60-130%
2037-26-5	Toluene-D8	102%	102%	102%	60-130%
460-00-4	4-Bromofluorobenzene	101%	100%	101%	60-130%

(a) Outside laboratory control limits.

\* = Outside of Control Limits.



11/30/12

**Technical Report for**

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**EquoLogic**

Mills College - 5000 MacArthur Blvd., Oakland, CA

411.01.01

Accutest Job Number: C24713

Sampling Date: 11/08/12

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**Report to:**

EquoLogic  
15936 Barry Lane  
Monte Sereno, CA 95030  
ldooley@equologicgroup.com  
  
ATTN: Lee Dooley

**Total number of pages in report: 60**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

**Kesavalu M. Bagawandoss,**  
Ph.D., J.D., Lab Director

**Client Service contact: Nutan Kabir 408-588-0200**

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

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Test results relate only to samples analyzed.

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### Sample Summary

EquoLogic

Job No: C24713

Mills College - 5000 MacArthur Blvd., Oakland, CA  
 Project No: 411.01.01

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C24713-1	11/08/12	00:00 LD	11/09/12	SO	Soil	B-12, 5'
C24713-2	11/08/12	00:00 LD	11/09/12	SO	Soil	B-12, 10'
C24713-3	11/08/12	00:00 LD	11/09/12	SO	Soil	B-12, 15'
C24713-4	11/08/12	00:00 LD	11/09/12	SO	Soil	B-12, 20'
C24713-5	11/08/12	00:00 LD	11/09/12	SO	Soil	B-12, 25'
C24713-6	11/08/12	00:00 LD	11/09/12	SO	Soil	B-13, 5'
C24713-7	11/08/12	00:00 LD	11/09/12	SO	Soil	B-13, 10'
C24713-8	11/08/12	00:00 LD	11/09/12	SO	Soil	B-13, 15'
C24713-9	11/08/12	00:00 LD	11/09/12	SO	Soil	B-13, 20'
C24713-10	11/08/12	00:00 LD	11/09/12	SO	Soil	B-13, 22'
C24713-11	11/08/12	00:00 LD	11/09/12	AQ	Ground Water	B-12
C24713-12	11/08/12	00:00 LD	11/09/12	AQ	Ground Water	B-13
C24713-13	11/08/12	00:00 LD	11/09/12	SO	Soil	B-12, 29'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



## Summary of Hits

Job Number: C24713  
 Account: EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA  
 Collected: 11/08/12

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C24713-1	B-12, 5'					
Toluene		1.5 J	4.9	0.49	ug/kg	SW846 8260B
Xylene (total)		1.0 J	9.8	0.98	ug/kg	SW846 8260B
C24713-2	B-12, 10'					
Toluene		0.62 J	4.9	0.49	ug/kg	SW846 8260B
TPH (C10-C28)		3.17 J	9.8	2.4	mg/kg	SW846 8015B M
C24713-3	B-12, 15'					
Toluene		0.55 J	4.8	0.48	ug/kg	SW846 8260B
TPH (C10-C28)		5.12 J	10	2.5	mg/kg	SW846 8015B M
C24713-4	B-12, 20'					
TPH (C10-C28)		3.60 J	9.5	2.4	mg/kg	SW846 8015B M
C24713-5	B-12, 25'					
TPH (C10-C28)		9.30 J	9.9	2.5	mg/kg	SW846 8015B M
C24713-6	B-13, 5'					
TPH (C10-C28)		4.02 J	10	2.5	mg/kg	SW846 8015B M
C24713-7	B-13, 10'					
Toluene		1.5 J	4.9	0.49	ug/kg	SW846 8260B
Xylene (total)		3.1 J	9.7	0.97	ug/kg	SW846 8260B
TPH (C10-C28)		7.08 J	9.9	2.5	mg/kg	SW846 8015B M
C24713-8	B-13, 15'					
Naphthalene <sup>a</sup>		2910	1700	340	ug/kg	SW846 8260B
TPH (C10-C28)		1400	99	25	mg/kg	SW846 8015B M
C24713-9	B-13, 20'					
TPH (C10-C28)		2.85 J	9.9	2.5	mg/kg	SW846 8015B M
C24713-10	B-13, 22'					
Naphthalene		2.2 J	4.9	0.98	ug/kg	SW846 8260B

## Summary of Hits

Job Number: C24713  
 Account: EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA  
 Collected: 11/08/12

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TPH (C10-C28)		3.51 J	9.9	2.5	mg/kg	SW846 8015B M
C24713-11	B-12					
TPH (C10-C28)		0.0837 J	0.15	0.038	mg/l	SW846 8015B M
C24713-12	B-13					
Naphthalene <sup>b</sup>		18.0	5.0	0.50	ug/l	SW846 8260B
TPH (C10-C28)		9.46	1.0	0.25	mg/l	SW846 8015B M
C24713-13	B-12, 29'					
Toluene		1.5 J	4.8	0.48	ug/kg	SW846 8260B
Xylene (total)		1.7 J	9.6	0.96	ug/kg	SW846 8260B
TPH (C10-C28)		3.01 J	9.9	2.5	mg/kg	SW846 8015B M

(a) Dilution required due to high concentration of non-target hydrocarbons.

(b) Sample vial contained more than 0.5cm of sediment.



**Sample Results**

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**Report of Analysis**

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Report of Analysis

Client Sample ID:	B-12, 5'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-1	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M36433.D	1	11/13/12	XB	n/a	n/a	VM1120
Run #2							

Run #	Initial Weight
Run #1	5.09 g
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.49	ug/kg	
108-88-3	Toluene	1.5	4.9	0.49	ug/kg	J
100-41-4	Ethylbenzene	ND	4.9	0.49	ug/kg	
1330-20-7	Xylene (total)	1.0	9.8	0.98	ug/kg	J
106-93-4	1,2-Dibromoethane	ND	4.9	0.49	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.9	0.49	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	0.49	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	0.49	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.98	ug/kg	
91-20-3	Naphthalene	ND	4.9	0.98	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	0.49	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		60-130%
2037-26-5	Toluene-D8	98%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b> B-12, 5'							
<b>Lab Sample ID:</b> C24713-1						<b>Date Sampled:</b> 11/08/12	
<b>Matrix:</b> SO - Soil						<b>Date Received:</b> 11/09/12	
<b>Method:</b> SW846 8015B M SW846 3545A						<b>Percent Solids:</b> n/a <sup>a</sup>	
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA							

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH027971.D	1	11/12/12	LB	11/12/12	OP7020	GHH856
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	9.9	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	82%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-12, 10'	Date Sampled: 11/08/12
Lab Sample ID: C24713-2	Date Received: 11/09/12
Matrix: SO - Soil	Percent Solids: n/a <sup>a</sup>
Method: SW846 8260B	
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M36434.D	1	11/13/12	XB	n/a	n/a	VM1120
Run #2							

Run #	Initial Weight
Run #1	5.08 g
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.49	ug/kg	
108-88-3	Toluene	0.62	4.9	0.49	ug/kg	J
100-41-4	Ethylbenzene	ND	4.9	0.49	ug/kg	
1330-20-7	Xylene (total)	ND	9.8	0.98	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.9	0.49	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.9	0.49	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	0.49	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	0.49	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.98	ug/kg	
91-20-3	Naphthalene	ND	4.9	0.98	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	0.49	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		60-130%
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	96%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-12, 10'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-2	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8015B M SW846 3545A		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH027972.D	1	11/12/12	LB	11/12/12	OP7020	GHH856
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	3.17	9.8	2.4	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	66%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-12, 15'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-3	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M36435.D	1	11/13/12	XB	n/a	n/a	VM1120
Run #2							

Run #	Initial Weight
Run #1	5.18 g
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.8	0.48	ug/kg	
108-88-3	Toluene	0.55	4.8	0.48	ug/kg	J
100-41-4	Ethylbenzene	ND	4.8	0.48	ug/kg	
1330-20-7	Xylene (total)	ND	9.7	0.97	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.8	0.48	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.8	0.48	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.8	0.48	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.8	0.48	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.8	0.97	ug/kg	
91-20-3	Naphthalene	ND	4.8	0.97	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.8	0.48	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		60-130%
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

Client Sample ID:	B-12, 15'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-3	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8015B M SW846 3545A		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH027974.D	1	11/12/12	LB	11/12/12	OP7020	GHH856
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	5.12	10	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	56%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-12, 20'	Date Sampled: 11/08/12
Lab Sample ID: C24713-4	Date Received: 11/09/12
Matrix: SO - Soil	Percent Solids: n/a <sup>a</sup>
Method: SW846 8260B	
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M36436.D	1	11/13/12	XB	n/a	n/a	VM1120
Run #2							

Run #	Initial Weight
Run #1	5.22 g
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.8	0.48	ug/kg	
108-88-3	Toluene	ND	4.8	0.48	ug/kg	
100-41-4	Ethylbenzene	ND	4.8	0.48	ug/kg	
1330-20-7	Xylene (total)	ND	9.6	0.96	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.8	0.48	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.8	0.48	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.8	0.48	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.8	0.48	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.8	0.96	ug/kg	
91-20-3	Naphthalene	ND	4.8	0.96	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.8	0.48	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	38	9.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		60-130%
2037-26-5	Toluene-D8	98%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-12, 20'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-4	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8015B M SW846 3545A		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH027975.D	1	11/12/12	LB	11/12/12	OP7020	GHH856
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.5 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	3.60	9.5	2.4	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	72%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-12, 25'							
<b>Lab Sample ID:</b> C24713-5							
<b>Matrix:</b> SO - Soil					<b>Date Sampled:</b> 11/08/12		
<b>Method:</b> SW846 8260B					<b>Date Received:</b> 11/09/12		
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA					<b>Percent Solids:</b> n/a <sup>a</sup>		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M36438.D	1	11/13/12	XB	n/a	n/a	VM1120
Run #2							

Run #	Initial Weight
Run #1	5.16 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.8	0.48	ug/kg	
108-88-3	Toluene	ND	4.8	0.48	ug/kg	
100-41-4	Ethylbenzene	ND	4.8	0.48	ug/kg	
1330-20-7	Xylene (total)	ND	9.7	0.97	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.8	0.48	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.8	0.48	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.8	0.48	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.8	0.48	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.8	0.97	ug/kg	
91-20-3	Naphthalene	ND	4.8	0.97	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.8	0.48	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		60-130%
2037-26-5	Toluene-D8	97%		60-130%
460-00-4	4-Bromofluorobenzene	96%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	B-12, 25'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-5	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8015B M SW846 3545A		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH027976.D	1	11/12/12	LB	11/12/12	OP7020	GHH856
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	9.30	9.9	2.5	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	65%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	B-13, 5'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-6	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M36439.D	1	11/13/12	XB	n/a	n/a	VM1120
Run #2							

Run #	Initial Weight
Run #1	5.05 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	0.99	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	0.99	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.99	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	9.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-13, 5'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-6	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8015B M SW846 3545A		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH028019.D	1	11/13/12	JH	11/13/12	OP7027	GHH857
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	4.02	10	2.5	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	61%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	B-13, 10'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-7	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M36443.D	1	11/13/12	XB	n/a	n/a	VM1120
Run #2							

Run #	Initial Weight
Run #1	5.14 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.49	ug/kg	
108-88-3	Toluene	1.5	4.9	0.49	ug/kg	J
100-41-4	Ethylbenzene	ND	4.9	0.49	ug/kg	
1330-20-7	Xylene (total)	3.1	9.7	0.97	ug/kg	J
106-93-4	1,2-Dibromoethane	ND	4.9	0.49	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.9	0.49	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	0.49	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	0.49	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.97	ug/kg	
91-20-3	Naphthalene	ND	4.9	0.97	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	0.49	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		60-130%
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



Report of Analysis

Client Sample ID:	B-13, 10'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-7	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8015B M SW846 3545A		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH028020.D	1	11/14/12	JH	11/13/12	OP7027	GHH857
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	7.08	9.9	2.5	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	47%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-13, 15'	Date Sampled: 11/08/12
Lab Sample ID: C24713-8	Date Received: 11/09/12
Matrix: SO - Soil	Percent Solids: n/a <sup>a</sup>
Method: SW846 8260B	
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>b</sup>	M36450.D	1	11/13/12	XB	n/a	n/a	VM1120
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	7.45 g	5.0 ml	10.0 ul
Run #2			

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1700	170	ug/kg	
108-88-3	Toluene	ND	1700	170	ug/kg	
100-41-4	Ethylbenzene	ND	1700	170	ug/kg	
1330-20-7	Xylene (total)	ND	3400	340	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1700	170	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1700	170	ug/kg	
108-20-3	Di-Isopropyl ether	ND	1700	170	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	1700	170	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1700	340	ug/kg	
91-20-3	Naphthalene	2910	1700	340	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	1700	170	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	13000	3400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		60-130%
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

- (a) All results reported on a wet weight basis.
- (b) Dilution required due to high concentration of non-target hydrocarbons.

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-13, 15' <b>Lab Sample ID:</b> C24713-8 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B M SW846 3545A <b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA	<b>Date Sampled:</b> 11/08/12 <b>Date Received:</b> 11/09/12 <b>Percent Solids:</b> n/a <sup>a</sup>
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH028071.D	10	11/14/12	JH	11/13/12	OP7027	GHH858
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	1400	99	25	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	59%		45-140%		

(a) All results reported on a wet weight basis.

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ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL - Method Detection Limit	J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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## Report of Analysis

Client Sample ID:	B-13, 20'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-9	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846.8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L20879.D	1	11/13/12	XB	n/a	n/a	VL661
Run #2							

Run #	Initial Weight
Run #1	5.18 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.8	0.48	ug/kg	
108-88-3	Toluene	ND	4.8	0.48	ug/kg	
100-41-4	Ethylbenzene	ND	4.8	0.48	ug/kg	
1330-20-7	Xylene (total)	ND	9.7	0.97	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.8	0.48	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.8	0.48	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.8	0.48	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.8	0.48	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.8	0.97	ug/kg	
91-20-3	Naphthalene	ND	4.8	0.97	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.8	0.48	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		60-130%
2037-26-5	Toluene-D8	91%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

**Report of Analysis**

<b>Client Sample ID:</b> B-13, 20'		
<b>Lab Sample ID:</b> C24713-9		
<b>Matrix:</b> SO - Soil		<b>Date Sampled:</b> 11/08/12
<b>Method:</b> SW846 8015B M SW846 3545A		<b>Date Received:</b> 11/09/12
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA		<b>Percent Solids:</b> n/a <sup>a</sup>

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG39087.D	1	11/15/12	LB	11/14/12	OP7027	GGG1036
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	2.85	9.9	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	90%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-13, 22'	<b>Date Sampled:</b> 11/08/12
<b>Lab Sample ID:</b> C24713-10	<b>Date Received:</b> 11/09/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B	
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L20884.D	1	11/13/12	XB	n/a	n/a	VL661
Run #2							

Run #	Initial Weight
Run #1	5.09 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.49	ug/kg	
108-88-3	Toluene	ND	4.9	0.49	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	0.49	ug/kg	
1330-20-7	Xylene (total)	ND	9.8	0.98	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.9	0.49	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.9	0.49	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	0.49	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	0.49	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.98	ug/kg	
91-20-3	Naphthalene	2.2	4.9	0.98	ug/kg	J
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	0.49	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		60-130%
2037-26-5	Toluene-D8	89%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-13, 22' <b>Lab Sample ID:</b> C24713-10 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B M SW846 3545A <b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA	<b>Date Sampled:</b> 11/08/12 <b>Date Received:</b> 11/09/12 <b>Percent Solids:</b> n/a <sup>a</sup>
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH028023.D	1	11/14/12	JH	11/13/12	OP7027	GHH857
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	3.51	9.9	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	66%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-12	Date Sampled:	11/08/12
Lab Sample ID:	C24713-11	Date Received:	11/09/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Q11709.D	1	11/14/12	TN	n/a	n/a	VQ458
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		60-130%
2037-26-5	Toluene-D8	97%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-12	<b>Date Sampled:</b> 11/08/12
<b>Lab Sample ID:</b> C24713-11	<b>Date Received:</b> 11/09/12
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C	
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH028015.D	1	11/13/12	JH	11/12/12	OP7024	GHH857
Run #2							

Run #	Initial Volume	Final Volume
Run #1	660 ml	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0837	0.15	0.038	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	86%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: B-13	Date Sampled: 11/08/12
Lab Sample ID: C24713-12	Date Received: 11/09/12
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Q11710.D	1	11/14/12	TN	n/a	n/a	VQ458
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	18.0	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		60-130%
2037-26-5	Toluene-D8	93%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

**Report of Analysis**

<b>Client Sample ID:</b> B-13	<b>Date Sampled:</b> 11/08/12
<b>Lab Sample ID:</b> C24713-12	<b>Date Received:</b> 11/09/12
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C	
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH028072.D	10	11/14/12	JH	11/12/12	OP7024	GHH858
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	9.46	1.0	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	65%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	B-12, 29'	Date Sampled:	11/08/12
Lab Sample ID:	C24713-13	Date Received:	11/09/12
Matrix:	SO - Soil	Percent Solids:	n/a <sup>a</sup>
Method:	SW846 8260B		
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M36411.D	1	11/12/12	XB	n/a	n/a	VM1119
Run #2							

Run #	Initial Weight
Run #1	5.22 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.8	0.48	ug/kg	
108-88-3	Toluene	1.5	4.8	0.48	ug/kg	J
100-41-4	Ethylbenzene	ND	4.8	0.48	ug/kg	
1330-20-7	Xylene (total)	1.7	9.6	0.96	ug/kg	J
106-93-4	1,2-Dibromoethane	ND	4.8	0.48	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.8	0.48	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.8	0.48	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.8	0.48	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.8	0.96	ug/kg	
91-20-3	Naphthalene	ND	4.8	0.96	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.8	0.48	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	38	9.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		60-130%
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	95%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-12, 29'	<b>Date Sampled:</b> 11/08/12
<b>Lab Sample ID:</b> C24713-13	<b>Date Received:</b> 11/09/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A	
<b>Project:</b> Mills College - 5000 MacArthur Blvd., Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH028024.D	1	11/14/12	JH	11/13/12	OP7027	GHH857
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

## TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	3.01	9.9	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	60%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Misc. Forms

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Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody





# CHAIN OF CUSTODY

2106 Lundy Ave, San Jose, CA 95131  
 (408) 588-0200 FAX: (408) 588-0201

FE0-EX Tracking # \_\_\_\_\_ Bottle Order Control # \_\_\_\_\_  
 Accutest Quote # \_\_\_\_\_ Accutest NC Job #: C  
C24713

Client / Reporting Information			Project Information			Requested Analysis										Matrix Codes								
Company Name: <b>EnoLogic</b>			Project Name: <b>MILLS COLLEGE</b>													WW- Wastewater GW- Ground Water SW- Surface Water SO- Soil CF-01 WF- Wipe LIQ - Non-aqueous Liquid AIR DW- Drinking Water (Purified Only)								
Address: _____			Street: _____																					
City: _____ State: _____ Zip: _____			City: _____ State: _____																					
Project Contact: <b>L. E. DOOLEY</b>			Project #: <b>411.01.01</b>																					
Phone #: <b>(408) 656 2505</b>			EMAIL: <b>L.DOOLEY@ENOLOGICGROUP.COM</b>																					
Sampler's Name: <b>Lec Dooley</b>			Client Purchase Order #: _____																					
Accutest Sample ID	Sample ID / Field Point / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	Number of preserved bottles																	
							Q	1	2	3	4	5	6	7	8	9	10							
11	B-12	11/8/12			GW	3																		
↓	B-12	↓			↓	2																		
-12	B-13	↓			GW	3																		
↓	B-13	↓			↓	2																		
	Blanks	↓				1																		
(-13)	B12-29'				SO	1																		

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 EPA 8215  
 EPA 8210-108  
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 EPA 8210-115  
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 EPA 8210-200

Turnaround Time (Business days)		Data Deliverable Information		Comments / Remarks	
<input checked="" type="checkbox"/> 10 Day <input type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day (125% markup) <input type="checkbox"/> 2 Day (160% markup) <input type="checkbox"/> 1 Day (200% markup) <input type="checkbox"/> Same Day (300% markup)	Approved By/Date: _____	<input type="checkbox"/> Commercial "A" - Results only <input checked="" type="checkbox"/> Commercial "B" - Results with QC summaries <input type="checkbox"/> Commercial "B+" - Results, QC, and chromatograms <input type="checkbox"/> PUL1 - Level 4 data package <input type="checkbox"/> EDF for Geotracker <input type="checkbox"/> EOD Format Provide EDF Global ID: _____ Provide EDF Logcode: _____			

Emergency T/A data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.					
Relinquished by: <b>L.D. Dooley</b>	Date/Time: <b>11/9/12</b>	Received by: <b>[Signature]</b>	Date/Time: <b>11-09-12</b>	Relinquished by: <b>[Signature]</b>	Date/Time: <b>11-09-12</b>
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Relinquished by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Relinquished by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Relinquished by: _____	Date/Time: _____

C24713: Chain of Custody  
Page 2 of 3





**GC/MS Volatiles**

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**QC Data Summaries**

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**Includes the following where applicable:**

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1119-MB	M36396.D	1	11/12/12	XB	n/a	n/a	VM1119

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-13

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	94% 60-130%
2037-26-5	Toluene-D8	99% 60-130%
460-00-4	4-Bromofluorobenzene	94% 60-130%

# Method Blank Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL661-MB	L20876.D	1	11/13/12	XB	n/a	n/a	VL661

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-9, C24713-10

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Results	Limits
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	92%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

5.12  
5

# Method Blank Summary

Job Number: C24713  
Account: EQUOCAMS EquoLogic  
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1120-MB	M36432.D	1	11/13/12	XB	n/a	n/a	VM1120

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-1, C24713-2, C24713-3, C24713-4, C24713-5, C24713-6, C24713-7, C24713-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	100% 60-130%
2037-26-5	Toluene-D8	97% 60-130%
460-00-4	4-Bromofluorobenzene	96% 60-130%

# Method Blank Summary

Job Number: C24713  
Account: EQUOCAMS EquoLogic  
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ458-MB	Q11704.D	1	11/14/12	TN	n/a	n/a	VQ458

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-11, C24713-12

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	60-130%
2037-26-5	Toluene-D8	97%	60-130%
460-00-4	4-Bromofluorobenzene	92%	60-130%

# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1119-BS	M36393.D	1	11/12/12	XB	n/a	n/a	VM1119
VM1119-BSD	M36394.D	1	11/12/12	XB	n/a	n/a	VM1119

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-13

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	39.0	98	38.2	96	2	60-130/30
106-93-4	1,2-Dibromoethane	40	36.9	92	36.1	90	2	60-130/30
107-06-2	1,2-Dichloroethane	40	34.7	87	33.3	83	4	60-130/30
108-20-3	Di-Isopropyl ether	40	41.3	103	41.1	103	0	60-130/30
100-41-4	Ethylbenzene	40	36.2	91	35.7	89	1	60-130/30
637-92-3	Ethyl tert-Butyl Ether	40	39.3	98	38.3	96	3	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	39.8	100	38.9	97	2	60-130/30
91-20-3	Naphthalene	40	38.4	96	38.1	95	1	60-130/30
994-05-8	Tert-Amyl Methyl Ether	40	40.2	101	39.7	99	1	60-130/30
75-65-0	Tert Butyl Alcohol	200	195	98	199	100	2	60-130/30
108-88-3	Toluene	40	36.5	91	36.1	90	1	60-130/30
1330-20-7	Xylene (total)	120	109	91	108	90	1	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	98%	60-130%
2037-26-5	Toluene-D8	93%	93%	60-130%
460-00-4	4-Bromofluorobenzene	96%	97%	60-130%

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24713

Account: EQUOCAMS EquoLogic

Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL661-BS	L20873.D	1	11/13/12	XB	n/a	n/a	VL661
VL661-BSD	L20874.D	1	11/13/12	XB	n/a	n/a	VL661

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-9, C24713-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	37.8	95	40.1	100	6	60-130/30
106-93-4	1,2-Dibromoethane	40	37.5	94	38.2	96	2	60-130/30
107-06-2	1,2-Dichloroethane	40	39.8	100	42.4	106	6	60-130/30
108-20-3	Di-Isopropyl ether	40	35.4	89	35.7	89	1	60-130/30
100-41-4	Ethylbenzene	40	39.4	99	39.1	98	1	60-130/30
637-92-3	Ethyl tert-Butyl Ether	40	37.2	93	37.4	94	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	38.0	95	38.6	97	2	60-130/30
91-20-3	Naphthalene	40	40.0	100	40.9	102	2	60-130/30
994-05-8	Tert-Amyl Methyl Ether	40	36.6	92	37.3	93	2	60-130/30
75-65-0	Tert Butyl Alcohol	200	180	90	197	99	9	60-130/30
108-88-3	Toluene	40	38.7	97	38.4	96	1	60-130/30
1330-20-7	Xylene (total)	120	121	101	118	98	3	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	98%	60-130%
2037-26-5	Toluene-D8	91%	90%	60-130%
460-00-4	4-Bromofluorobenzene	98%	95%	60-130%

\* = Outside of Control Limits.



# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1120-BS	M36429.D	1	11/13/12	XB	n/a	n/a	VM1120
VM1120-BSD	M36430.D	1	11/13/12	XB	n/a	n/a	VM1120

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-1, C24713-2, C24713-3, C24713-4, C24713-5, C24713-6, C24713-7, C24713-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	44.0	110	43.5	109	1	60-130/30
106-93-4	1,2-Dibromoethane	40	40.6	102	41.4	104	2	60-130/30
107-06-2	1,2-Dichloroethane	40	41.1	103	40.3	101	2	60-130/30
108-20-3	Di-Isopropyl ether	40	44.5	111	44.6	112	0	60-130/30
100-41-4	Ethylbenzene	40	40.8	102	39.4	99	3	60-130/30
637-92-3	Ethyl tert-Butyl Ether	40	43.2	108	42.8	107	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	42.9	107	43.2	108	1	60-130/30
91-20-3	Naphthalene	40	41.0	103	41.2	103	0	60-130/30
994-05-8	Tert-Amyl Methyl Ether	40	43.7	109	43.7	109	0	60-130/30
75-65-0	Tert Butyl Alcohol	200	235	118	237	119	1	60-130/30
108-88-3	Toluene	40	40.4	101	39.8	100	1	60-130/30
1330-20-7	Xylene (total)	120	123	103	120	100	2	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	102%	60-130%
2037-26-5	Toluene-D8	92%	93%	60-130%
460-00-4	4-Bromofluorobenzene	99%	97%	60-130%

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ458-BS	Q11700.D	1	11/14/12	TN	n/a	n/a	VQ458
VQ458-BSD	Q11701.D	1	11/14/12	TN	n/a	n/a	VQ458

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-11, C24713-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	17.7	89	17.4	87	2	60-130/30
106-93-4	1,2-Dibromoethane	20	21.0	105	19.1	96	9	60-130/30
107-06-2	1,2-Dichloroethane	20	18.7	94	17.4	87	7	60-130/30
108-20-3	Di-Isopropyl ether	20	14.7	74	15.6	78	6	60-130/30
100-41-4	Ethylbenzene	20	17.8	89	17.5	88	2	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	17.5	88	18.3	92	4	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	18.2	91	19.1	96	5	60-130/30
91-20-3	Naphthalene	20	21.3	107	20.6	103	3	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	17.2	86	19.0	95	10	60-130/30
75-65-0	Tert-Butyl Alcohol	100	116	116	115	115	1	60-130/30
108-88-3	Toluene	20	17.4	87	16.9	85	3	60-130/30
1330-20-7	Xylene (total)	60	55.3	92	54.3	91	2	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	103%	60-130%
2037-26-5	Toluene-D8	93%	93%	60-130%
460-00-4	4-Bromofluorobenzene	99%	87%	60-130%

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

Job Number: C24713

Account: EQUOCAMS EquoLogic

Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1119-LCS	M36395.D	1	11/12/12	XB	n/a	n/a	VM1119

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-13

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	60-130%
2037-26-5	Toluene-D8	98%	60-130%
460-00-4	4-Bromofluorobenzene	95%	60-130%

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1120-LCS	M36431.D	1	11/13/12	XB	n/a	n/a	VM1120

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-1, C24713-2, C24713-3, C24713-4, C24713-5, C24713-6, C24713-7, C24713-8

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	60-130%
2037-26-5	Toluene-D8	97%	60-130%
460-00-4	4-Bromofluorobenzene	96%	60-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C24713

Account: EQUOCAMS EquoLogic

Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C24726-1MS	M36402.D	1	11/12/12	XB	n/a	n/a	VM1119
C24726-1MSD	M36403.D	1	11/12/12	XB	n/a	n/a	VM1119
C24726-1	M36397.D	1	11/12/12	XB	n/a	n/a	VM1119

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-13

CAS No.	Compound	C24726-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	40	39.5	99	38.7	97	2	60-130/30
106-93-4	1,2-Dibromoethane	ND	40	40.8	102	40.8	102	0	60-130/30
107-06-2	1,2-Dichloroethane	ND	40	39.2	98	36.7	92	7	60-130/30
108-20-3	Di-Isopropyl ether	ND	40	39.4	99	39.2	98	1	60-130/30
100-41-4	Ethylbenzene	ND	40	35.8	90	35.3	89	1	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND	40	38.5	96	37.7	95	2	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	40	40.0	100	39.1	98	2	60-130/30
91-20-3	Naphthalene	ND	40	39.4	99	37.7	95	4	60-130/30
994-05-8	Tert-Amyl Methyl Ether	ND	40	40.5	101	39.8	100	2	60-130/30
75-65-0	Tert Butyl Alcohol	ND	200	253	127	243	122	4	60-130/30
108-88-3	Toluene	ND	40	35.9	90	36.3	91	1	60-130/30
1330-20-7	Xylene (total)	ND	120	107	89	108	90	1	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C24726-1	Limits
1868-53-7	Dibromofluoromethane	100%	99%	100%	60-130%
2037-26-5	Toluene-D8	92%	93%	96%	60-130%
460-00-4	4-Bromofluorobenzene	100%	98%	95%	60-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C24713-1MS	M36448.D	1	11/13/12	XB	n/a	n/a	VM1120
C24713-1MSD	M36449.D	1	11/13/12	XB	n/a	n/a	VM1120
C24713-1	M36433.D	1	11/13/12	XB	n/a	n/a	VM1120

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-1, C24713-2, C24713-3, C24713-4, C24713-5, C24713-6, C24713-7, C24713-8

CAS No.	Compound	C24713-1 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		40	35.8	90	36.6	92	2	60-130/30
106-93-4	1,2-Dibromoethane	ND		40	35.1	88	34.2	86	3	60-130/30
107-06-2	1,2-Dichloroethane	ND		40	29.7	74	29.4	74	1	60-130/30
108-20-3	Di-Isopropyl ether	ND		40	34.7	87	34.3	86	1	60-130/30
100-41-4	Ethylbenzene	ND		40	31.8	80	32.1	81	1	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND		40	31.8	80	30.9	78	3	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		40	33.1	83	32.1	81	3	60-130/30
91-20-3	Naphthalene	ND		40	30.3	76	30.6	77	1	60-130/30
994-05-8	Tert-Amyl Methyl Ether	ND		40	33.9	85	33.0	83	3	60-130/30
75-65-0	Tert Butyl Alcohol	ND		200	220	110	206	103	7	60-130/30
108-88-3	Toluene	1.5	J	40	35.4	85	35.0	84	1	60-130/30
1330-20-7	Xylene (total)	1.0	J	120	99.1	82	99.1	82	0	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C24713-1	Limits
1868-53-7	Dibromofluoromethane	99%	98%	103%	60-130%
2037-26-5	Toluene-D8	91%	92%	98%	60-130%
460-00-4	4-Bromofluorobenzene	97%	96%	97%	60-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C24708-15MS	Q11718.D	10	11/14/12	TN	n/a	n/a	VQ458
C24708-15MSD	Q11719.D	10	11/14/12	TN	n/a	n/a	VQ458
C24708-15	Q11706.D	10	11/14/12	TN	n/a	n/a	VQ458

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-11, C24713-12

CAS No.	Compound	C24708-15 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	200	196	98	209	105	6	60-130/25
106-93-4	1,2-Dibromoethane	ND	200	213	107	224	112	5	60-130/25
107-06-2	1,2-Dichloroethane	ND	200	201	101	210	105	4	60-130/25
108-20-3	Di-Isopropyl ether	ND	200	162	81	177	89	9	60-130/25
100-41-4	Ethylbenzene	ND	200	192	96	208	104	8	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND	200	189	95	204	102	8	60-130/25
1634-04-4	Methyl Tert Butyl Ether	553	200	683	65	743	95	8	60-130/25
91-20-3	Naphthalene	ND	200	208	104	217	109	4	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND	200	197	99	212	106	7	60-130/25
75-65-0	Tert-Butyl Alcohol	56.0	1000	1110	105	1120	106	1	60-130/25
108-88-3	Toluene	ND	200	190	95	208	104	9	60-130/25
1330-20-7	Xylene (total)	ND	600	565	94	615	103	8	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C24708-15	Limits
1868-53-7	Dibromofluoromethane	104%	103%	107%	60-130%
2037-26-5	Toluene-D8	93%	94%	94%	60-130%
460-00-4	4-Bromofluorobenzene	99%	99%	87%	60-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C24713-9MS	L20918.D	1	11/14/12	XB	n/a	n/a	VL661
C24713-9MSD	L20919.D	1	11/14/12	XB	n/a	n/a	VL661
C24713-9	L20879.D	1	11/13/12	XB	n/a	n/a	VL661

The QC reported here applies to the following samples:

Method: SW846 8260B

C24713-9, C24713-10

CAS No.	Compound	C24713-9 ug/kg	Spike Q	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	39.2	33.2	85	33.3	83	0	60-130/30
106-93-4	1,2-Dibromoethane	ND	39.2	34.5	88	34.8	87	1	60-130/30
107-06-2	1,2-Dichloroethane	ND	39.2	37.7	96	38.0	95	1	60-130/30
108-20-3	Di-Isopropyl ether	ND	39.2	31.0	79	32.3	81	4	60-130/30
100-41-4	Ethylbenzene	ND	39.2	31.5	80	31.5	79	0	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND	39.2	34.3	87	35.4	89	3	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	39.2	35.7	91	37.4	94	5	60-130/30
91-20-3	Naphthalene	ND	39.2	37.1	95	34.9	87	6	60-130/30
994-05-8	Tert-Amyl Methyl Ether	ND	39.2	34.8	89	36.0	90	3	60-130/30
75-65-0	Tert Butyl Alcohol	ND	196	206	105	224	112	8	60-130/30
108-88-3	Toluene	ND	39.2	32.3	82	32.5	81	1	60-130/30
1330-20-7	Xylene (total)	ND	118	96.4	82	96.9	81	1	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C24713-9	Limits
1868-53-7	Dibromofluoromethane	95%	99%	98%	60-130%
2037-26-5	Toluene-D8	87%	89%	91%	60-130%
460-00-4	4-Bromofluorobenzene	96%	95%	97%	60-130%

\* = Outside of Control Limits.



**GC Semi-volatiles**

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**QC Data Summaries**

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**Includes the following where applicable:**

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

Job Number: C24713  
Account: EQUOCAMS EquoLogic  
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7020-MB	HH027952.D1		11/12/12	LB	11/12/12	OP7020	GHH856

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24713-1, C24713-2, C24713-3, C24713-4, C24713-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	74%	45-140%

## Method Blank Summary

Job Number: C24713

Account: EQUOCAMS EquoLogic

Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7024-MB	HH027983.D1		11/13/12	JH	11/12/12	OP7024	GHH857

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24713-11, C24713-12

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.10	0.025	mg/l	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	81%	45-140%

## Method Blank Summary

Job Number: C24713

Account: EQUOCAMS EquoLogic

Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7027-MB	HH027989.D1		11/13/12	JH	11/13/12	OP7027	GHH857

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24713-6, C24713-7, C24713-8, C24713-9, C24713-10, C24713-13

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	79%	45-140%

# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7020-BS	HH027953.D1		11/12/12	LB	11/12/12	OP7020	GHH856
OP7020-BSD	HH027954.D1		11/12/12	LB	11/12/12	OP7020	GHH856

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24713-1, C24713-2, C24713-3, C24713-4, C24713-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	72.0	72	78.6	79	9	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	79%	86%	45-140%

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7024-BS	HH027984.D1		11/13/12	JH	11/12/12	OP7024	GHH857
OP7024-BSD	HH027985.D1		11/13/12	JH	11/12/12	OP7024	GHH857

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24713-11, C24713-12

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.838	84	0.859	86	2	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	92%	92%	45-140%

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7027-BS	HH027990.D1		11/13/12	JH	11/13/12	OP7027	GHH857
OP7027-BSD	HH027991.D1		11/13/12	JH	11/13/12	OP7027	GHH857

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24713-6, C24713-7, C24713-8, C24713-9, C24713-10, C24713-13

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	81.6	82	82.1	82	1	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	85%	85%	45-140%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7020-MS	HH027977.D1		11/12/12	LB	11/12/12	OP7020	GHH856
OP7020-MSD	HH027978.D1		11/12/12	LB	11/12/12	OP7020	GHH856
C24712-1	HH027956.D1		11/12/12	LB	11/12/12	OP7020	GHH856

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24713-1, C24713-2, C24713-3, C24713-4, C24713-5

CAS No.	Compound	C24712-1 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	10.4	99.1	83.9	74	79.0	69	6	45-140/30
CAS No.	Surrogate Recoveries	MS	MSD	C24712-1	Limits				
630-01-3	Hexacosane	79%	76%	74%	45-140%				

\* = Outside of Control Limits.



# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C24713  
 Account: EQUOCAMS EquoLogic  
 Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7024-MS	HH028112.D1		11/15/12	JH	11/12/12	OP7024	GHH859
OP7024-MSD	HH028113.D1		11/15/12	JH	11/12/12	OP7024	GHH859
C24728-1	HH028018.D1		11/13/12	JH	11/12/12	OP7024	GHH857

The QC reported here applies to the following samples:

Method: SW846 8015B M

C24713-11, C24713-12

CAS No.	Compound	C24728-1 mg/l	Spike Q	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD	
	TPH (C10-C28)	0.0331	J	1.89	1.68	87	1.66	86	1	45-140/25

CAS No.	Surrogate Recoveries	MS	MSD	C24728-1	Limits
630-01-3	Hexacosane	93%	94%	87%	45-140%

\* = Outside of Control Limits.

**ATTACHMENT E**

**Water Sampling Field Data Sheets**

# WELL GAUGING DATA

Project # 121019-CK1 Date 10/19/12 Client E@V@L@G@I@C GROUP

Site 5000 MACARTHUR BLVD, OAKLAND

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or <u>TOO</u>	Notes
MW-1	0946	2					19.40	32.82		
MW-2	0915	2				19.28	34.09			
MW-3	0837	2				19.21	32.62			
MW-1M	1040	2					13.75	20.88		
MW-2M	1145	2					10.83	19.57		
MW-3M	1105	2					13.06	17.10		v

# WELLHEAD INSPECTION CHECKLIST

Page 1 of 1

Client E G U O L O G I C G R O U P Date 10/19/12

Site Address 5000 MACARTHUR BLVD. OAKLAND

Job Number 121019-001 Technician CK

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	x		CHRISTY BOX		NO LOCK			
MW-2	x		CHRISTY BOX		NO LOCK			
MW-3	x		CHRISTY BOX		LOCK RUSTED			
MW-1M	x				LOCK RUSTED			
MW-2M						x		
MW-3M						x		

NOTES: MW-3M NO CAP, CASING BENT. IRRIGATION WELL BOX (GREEN)  
MW-2M. 3/3 BOLTS BROKEN, LOCK RUSTED, CAP BROKEN, TOP OF WELL BOX  
SEPARATED FROM GRADE

# WELL MONITORING DATA SHEET

Project #: 121019-CK1	Client: EQUOLOGIC GROUP
Sampler: C. KILPATRICK	Date: 10/19/12
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 32.82	Depth to Water (DTW): 19.40
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 22.08	

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

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

$2.1 \text{ (Gals.)} \times 3 = 6.3 \text{ Gals.}$ 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0951	18.7	6.67	710	574	2.1	
0954	18.6	6.69	704	360	4.2	
0957	18.5	6.70	715	518	6.3	
* 3 HCL VIALS - TPH-G, BTEX, MTBE, 5 ORYS, EDC, EOB, NAPHTHALENE						

Did well dewater?    Yes    NO      Gallons actually evacuated: 6.3

Sampling Date: 10/19/12    Sampling Time: 1000    Depth to Water: 20.48

Sample I.D.: MW-1      Laboratory: Kiff CalScience Other ACCUTEST

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other SEE COC

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

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

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

# WELL MONITORING DATA SHEET

Project #: 121019-CK1	Client: ECOLOGIC GROUP
Sampler: C. KUPATRICK	Date: 10/19/12
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 34.09	Depth to Water (DTW): 19.38
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>AVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 22.24	

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

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

$2.4 \text{ (Gals.)} \times 3 = 7.2 \text{ Gals.}$ 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0922	19.8	6.88	761	71000	2.4	
0925	19.6	6.90	739	684	4.8	
0928	19.5	6.91	747	71000	7.2	NOT @ 10%
* 3 HCL VOLS - TPH-G, BTEX, MTBE, 5 OXYLS, EDC, EOB, NAPHTHALENE						

Did well dewater?    Yes    No      Gallons actually evacuated: 7.2

Sampling Date: 10/19/12    Sampling Time: 0940    Depth to Water: 22.15 (SHORTER)

Sample I.D.: MW-2      Laboratory: Kiff CalScience Other ACCU-TEST

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other SEE LOC

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

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

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

## WELL MONITORING DATA SHEET

Project #: 121019-CK1	Client: <u>ECOLOGIC GROUP</u>
Sampler: <u>C. KILPATRICK</u>	Date: <u>10/19/12</u>
Well I.D.: <u>MW-3</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>32.62</u>	Depth to Water (DTW): <u>19.21</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(VVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>21.89</u>	

Purge Method: <u>Bailer</u>	Waterra	Sampling Method: <u>Bailer</u>
Disposable Bailer	Peristaltic	<u>Disposable Bailer</u>
Positive Air Displacement	Extraction Pump	Extraction Port
Electric Submersible	Other _____	Dedicated Tubing
		Other: _____

$2.1 \text{ (Gals.)} \times 3 = 6.3 \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														
1 Case Volume	Specified Volumes	Calculated Volume															

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0846	19.4	6.18	560	896	2.1	
0849	19.0	6.25	531	480	4.2	
0852	18.9	6.28	517	346	6.3	
* 3 HCL VMS - TPH-G, BTEX, MTBE, 5 OXY, EOC, EOB, NAPHTHALENE						

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: <u>6.3</u>	
Sampling Date: <u>10/19/12</u>	Sampling Time: <u>0900</u>	Depth to Water: <u>21.75</u>
Sample I.D.: <u>MW-3</u>	Laboratory: Kiff CalScience <u>(Other) ACCUTEST</u>	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) <u>(Other) SEE LOC</u>		
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:		
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	

## WELL MONITORING DATA SHEET

Project #: 121019-CK1	Client: ECOLOGIC GROUP
Sampler: C. KILPATRICK	Date: 10/19/12
Well I.D.: AW-1M	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 20.08	Depth to Water (DTW): 13.75
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (EVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.02	

Purge Method: (Bailer)	Waters: _____	Sampling Method: Bailer
Disposable Bailer	Peristaltic	(Disposable Bailer)
Positive Air Displacement	Extraction Pump	Extraction Port
Electric Submersible	Other _____	Dedicated Tubing
Other: _____		

$1.0 \text{ (Gals.)} \times 3 = 3.0 \text{ Gals.}$ <p style="font-size: small; margin: 0;">1 Case Volume      Specified Volumes      Calculated Volume</p>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1046	17.5	6.80	1607	348	1.0	
1048	17.3	6.78	1670	338	2.0	
1050	17.3	6.77	1674	340	3.0	
* 3 ILL WAS , 2 IL AMBER MP						

Did well dewater?	Yes	(No)	Gallons actually evacuated:	3.0	
Sampling Date:	10/19/12	Sampling Time:	1055	Depth to Water:	14-10
Sample I.D.:	AW-1M	Laboratory:	Kiff CalScience	(Other) ACCUTEST	
Analyzed for:	TPH-G BTEX MTBE TPH-D	Oxygenates (5)	(Other) SEE COC		
EB I.D. (if applicable):	@	Time	Duplicate I.D. (if applicable):		
Analyzed for:	TPH-G BTEX MTBE TPH-D	Oxygenates (5)	Other:		
D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L	
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV	



# WELL MONITORING DATA SHEET

Project #: 121019-CK1	Client: ECOLOGIC GROUP
Sampler: C. KILPATRICK	Date: 10/19/12
Well I.D.: MW-2M	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 19.57	Depth to Water (DTW): 10.83
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (EVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.58	

Purge Method: (Bailer)	Watera	Sampling Method: Bailer
Disposable Bailer	Peristaltic	(Disposable Bailer)
Positive Air Displacement	Extraction Pump	Extraction Port
Electric Submersible	Other _____	Dedicated Tubing
		Other: _____

$1.4 \text{ (Gals.)} \times 3 = 4.2 \text{ Gals.}$ <p style="font-size: small; margin: 0;">1 Case Volume      Specified Volumes      Calculated Volume</p>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1153	17.7	6.97	1701	374	1.4	
1155	17.6	6.95	1563	523	2.8	
1157	17.6	6.94	1528	871	4.2	
* 3 HCL vials - 2 IL NP AMPERS						

Did well dewater?    Yes     No    Gallons actually evacuated: 4.2

Sampling Date: 10/19/12    Sampling Time: 1205    Depth to Water: 12.35

Sample I.D.: MW-2M    Laboratory: Kiff CalScience    (Other) ACCUTEST

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Oxygenates (5)    (Other) SEE LOC

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

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Oxygenates (5)    Other:

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

# WELL MONITORING DATA SHEET

Project #: 121019-CK1	Client: <u>ECOLOGIC GROUP</u>
Sampler: <u>C. KILPATRICK</u>	Date: <u>10/19/12</u>
Well I.D.: <u>MW-3M</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>17.10</u>	Depth to Water (DTW): <u>13.07</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>BVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>13.88</u>	

Purge Method: <u>Bailer</u>	Water: <u>Peristaltic</u>	Sampling Method: <u>Bailer</u>
<u>Disposable Bailer</u> <u>CASING BENT</u>	<u>Peristaltic</u>	<u>Disposable Bailer</u>
<u>Positive Air Displacement</u>	<u>Extraction Pump</u>	<u>Extraction Port</u>
<u>Electric Submersible</u>	<u>Other</u>	<u>Dedicated Tubing</u>
		Other:

$0.6 \text{ (Gals.)} \times 3 = 1.8 \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
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1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														
1 Case Volume	Specified Volumes	Calculated Volume															

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1112	17.4	6.80	2099	121	0.6	
1114	17.4	6.74	2422	121	1.2	
1116	17.4	6.71	2409	58	1.8	
1119	17.4	6.71	2393	64	2.4	
* 3 well was - 2 IL NUMBERS						

Did well dewater? Yes  No  Gallons actually evacuated: 2.4

Sampling Date: 10/19/12 Sampling Time: 1125 Depth to Water: ~~13.07~~ 13.54

Sample I.D.: MW-3M Laboratory: Kiff CalScience Other AGL-TEST

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other SEE LOC

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

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

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

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