Mills College
5000 MacArthur Blvd.
Oakland, CA 94613
www.mills.edu

MILLS

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

May 6, 2013

RE: **1Q13 Groundwater Monitoring Report**
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

EquoLogic

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

May 6, 2013
Project 411-01.03

RE: **1Q13 Groundwater Monitoring Report**
Mills College
5000 MacArthur Boulevard
Oakland, California

Dear Ms. Jakub,

EquoLogic, on behalf of Mills College, has prepared the following 1Q13 semi-annual Groundwater Monitoring Report (**Figure 1**).

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

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.

Wells MW-1 through MW-3 were sampled in January 2000. TPH-G was 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. The wells were next sampled in October 2012. TPH-G was detected in the water sample from well MW-1 at 0.036 mg/l. TPH-G was below the laboratory reporting limit in wells MW-2 and MW-3. Benzene was detected only in well MW-1 at 1.7 ug/l. Tertiary butyl ether (TBA) was detected in well MW-2 at 10.9 ug/l.

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 formerly 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. Three groundwater monitoring wells were installed (MW-1 through MW-3, **Figure 3**).

Groundwater samples collected in October 2012 (Table 2) contained TPH-D from 0.0333 mg/l to 0.115 mg/l. No other parameters were detected in any of the samples from the three wells.

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 1Q13 groundwater gauging, sample collection, and chemical analysis event.

Toyon Meadow (Holgren Meadow)

Groundwater sample were collected from wells MW-1 through MW-3 (designated MW-1M through MW-3M for analysis) on April 22, 2013. Well caps were removed from each well and depth to groundwater was gauged using an electric sounder (**Table 1**). The wells were then purged of three casing volumes prior to sampling with a clean Teflon bailer. Field sampling data sheets are contained in **Attachment A**. The water samples were decanted into a 1.0 liter amber bottle and 40 milliliter glass vials with chemical preservative. The groundwater samples were stored in an ice chest for shipment to a California certified laboratory (Accutest of Northern California). Groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), 1,2-dibromoethane, 1,2-dichloroethane, five fuel oxygenates including MTBE, naphthalene by EPA Method 8260B, and total petroleum hydrocarbons as diesel (C10-28)(TPH-D) with silica-gel cleanup by Method 8015B.

Maintenance Yard

A groundwater sample was collected from wells MW-1 through MW-3 located adjacent to the former UST excavation on April 22, 2013. Well caps were removed from each well and depth to groundwater was gauged using an electric sounder (**Table 1**). The wells were then purged of three casing volumes prior to sampling with a clean Teflon bailer. Water sampling field data sheets are contained in **Attachment A**. 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.

Water samples were analyzed BTEX, 1,2-Dibromoethane, 1,2-dichloroethane, five fuel oxygenates including MTBE, naphthalene, and total petroleum hydrocarbons as gasoline (C6-10) by EPA Method 8260B.

RESULTS

Monitoring results were similar to previous event in October 2012.

Toyon Meadow (Holgren Meadow)

Depth to groundwater in wells ranged from 10.56 to 13.41 feet below top of casing. A flow direction to the west was calculated consistent with previous monitoring events (see **Figure 3**). The only parameter detected was TPH-D. TPH-D concentrations ranged from 0.0255 mg/l to 0.136 mg/l.

Maintenance Yard

Depth to groundwater in wells ranged from 17.21 to 17.33 feet bgs. A flow direction to the west was calculated consistent with previous monitoring events (see **Figure 2**). Benzene (3.6 ug/l), ethlybenzene (0.81 ug/l), 1,2-dibromoethane (0.55 ug/l), and MTBE (0.33 ug/l) were detected at low concentrations (**Table 2**) in the sample from well MW-1. TBA was detected in the sample from well MW-2 at 9.1 ug/l consistent with the previous sampling event (10.9 ug/l).

CONCLUSIONS AND RECOMMENDATIONS

EquoLogic presents the following conclusions and recommendations;

- Residual petroleum hydrocarbons in soil are currently having a minimal impact on groundwater quality in the area of Toyon/Holmgren Meadow and the maintenance yard.
- Equologic recommends evaluation of low risk case closure.

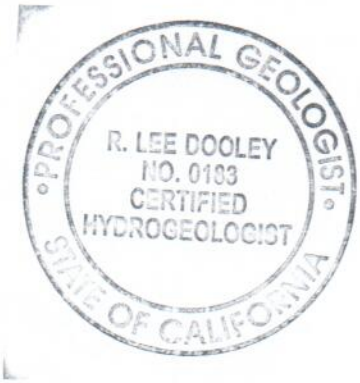
LIMITATIONS

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 – Groundwater Elevation Data
Table 2 – Summary of Groundwater Analytical Data

Figure 1 – Site Location Map
Figure 2 – Site Plan of Maintenance Yard
Figure 3 – Site Plan of Toyon/Holmgren Meadow
Figure 4 – Groundwater Elevation Contours, Maintanence Yard
Figure 5 – Groundwater Elevation Contours, Toyon/Holmgren Meadow

Attachment A – Water Sampling Field Data Sheets
Attachment B – Laboratory Analytical Reports

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

Table 1 - Summary of Groundwater Elevation Data
Mills College

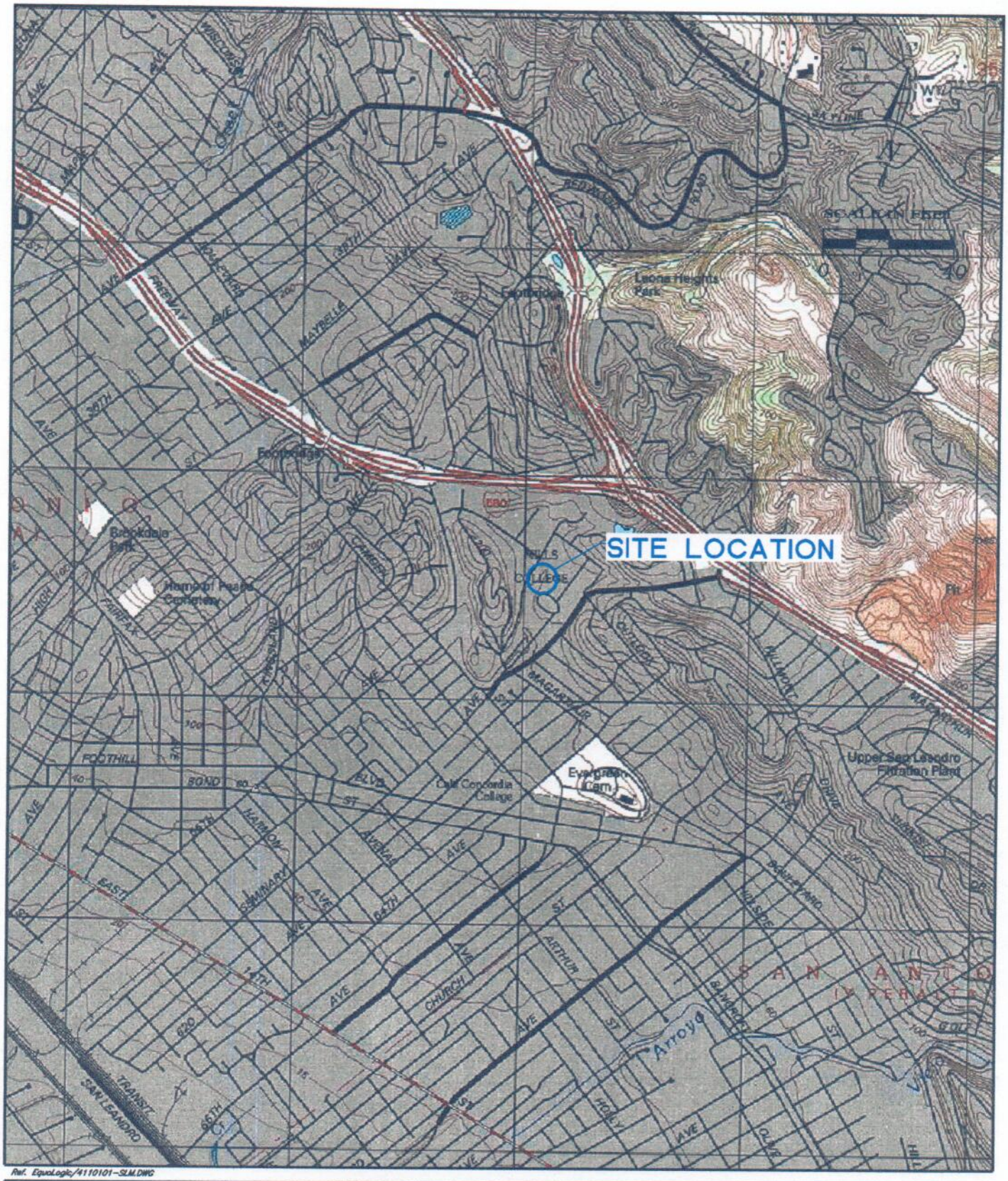
Well	Date	Depth to Water (feet btoc)	Elevation toc (feet local datum)	WL Elevation (feet)
Toyon/Holmgren Meadow				
MW-1M	10/19/2012	13.75	99.50	85.75
	4/22/2012	13.41	99.50	86.09
MW-2M	10/19/2012	10.83	100.00	89.17
	4/22/2012	10.56	100.00	89.44
MW-3M	10/19/2012	13.06	98.04	84.98
	4/22/2012	13.05	98.04	84.99
Maintenance Yard				
MW-1	10/19/2012	19.40	100.00	80.60
	4/22/2012	17.32	100.00	82.68
MW-2	10/19/2012	19.28	99.98	80.70
	4/22/2012	17.33	99.98	82.65
MW-3	10/19/2012	19.21	100.01	80.80
	4/22/2012	17.21	100.01	82.80
Notes:				
btoc	below top of casing			
toc	top of casing			

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	Napth ug/l	TAME ug/l	TBA ug/l	TPH (C10-28) mg/l
TOYON MEADOWS														
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	**0.0333**
	4/22/2013	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.0255**
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	**0.115**
	4/22/2013	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.136**
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	**0.0904**
	4/22/2013	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.0756**
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	**0.0837**
B-13	11/8/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	**18**	<0.40	<2.4	**9.46**
MAINTENANCE YARD														TPH (C6-10)
MW-1	10/19/2012	**1.7**	<0.20	**0.21**	<0.46	<0.20	**0.56**	<0.22	<0.22	**0.32**	<0.50	<0.40	<2.4	**0.036**
	4/22/2013	**3.6**	<0.20	**0.81**	<0.46	<0.20	**0.55**	<0.22	<0.22	**0.33**	<0.50	<0.40	<2.4	**0.049**
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
	4/22/2013	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	**9.1**	<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
	4/22/2013	<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

Notes

B	Benzene	DIPE	Di-isoproply ether	TPH (C10-28)	Total Petroleum Hydrocarbons as diesel
T	Toluene	ETBE	Ethyl tert-Butly Ether		
E	Ethylbenzene	MTBE	Methyl Tert Butyl Ether	TPH (6-10)	Total Petroleum Hydrocarbons as gasoline
X	Xylene	Napth	Napthalene		
1,2-Dibrm	1,2-Dibromoethane	TAME	Tert-Amyl Methyl Ether	ug/l	Microgarms per liter
1,2-Dichlorm	1,2-Dichloroethane	TBA	Tert Butyl Alcohol	mg/l	

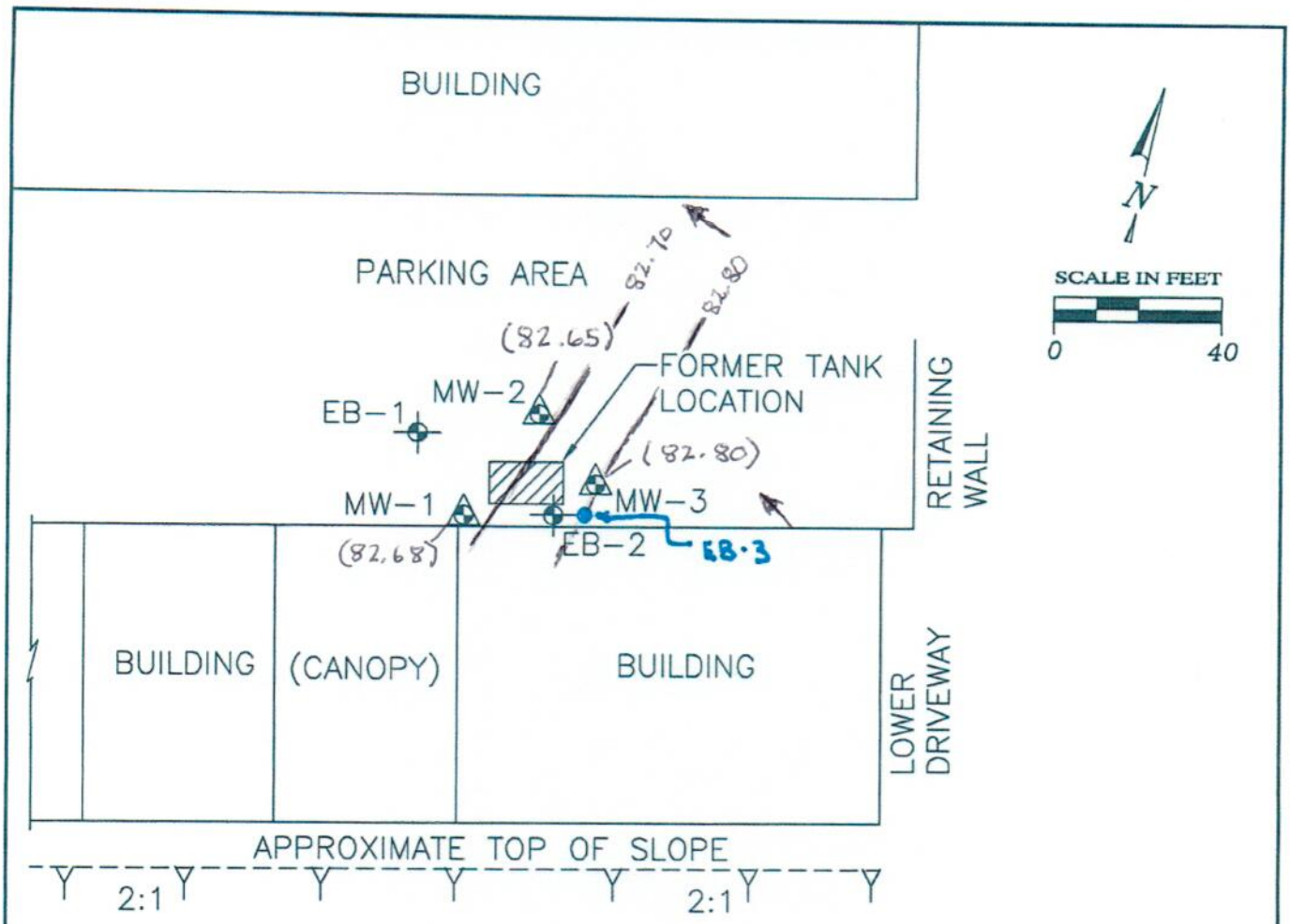


EquoLogic

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
- (82.80) Groundwater Elevation - Local Datum

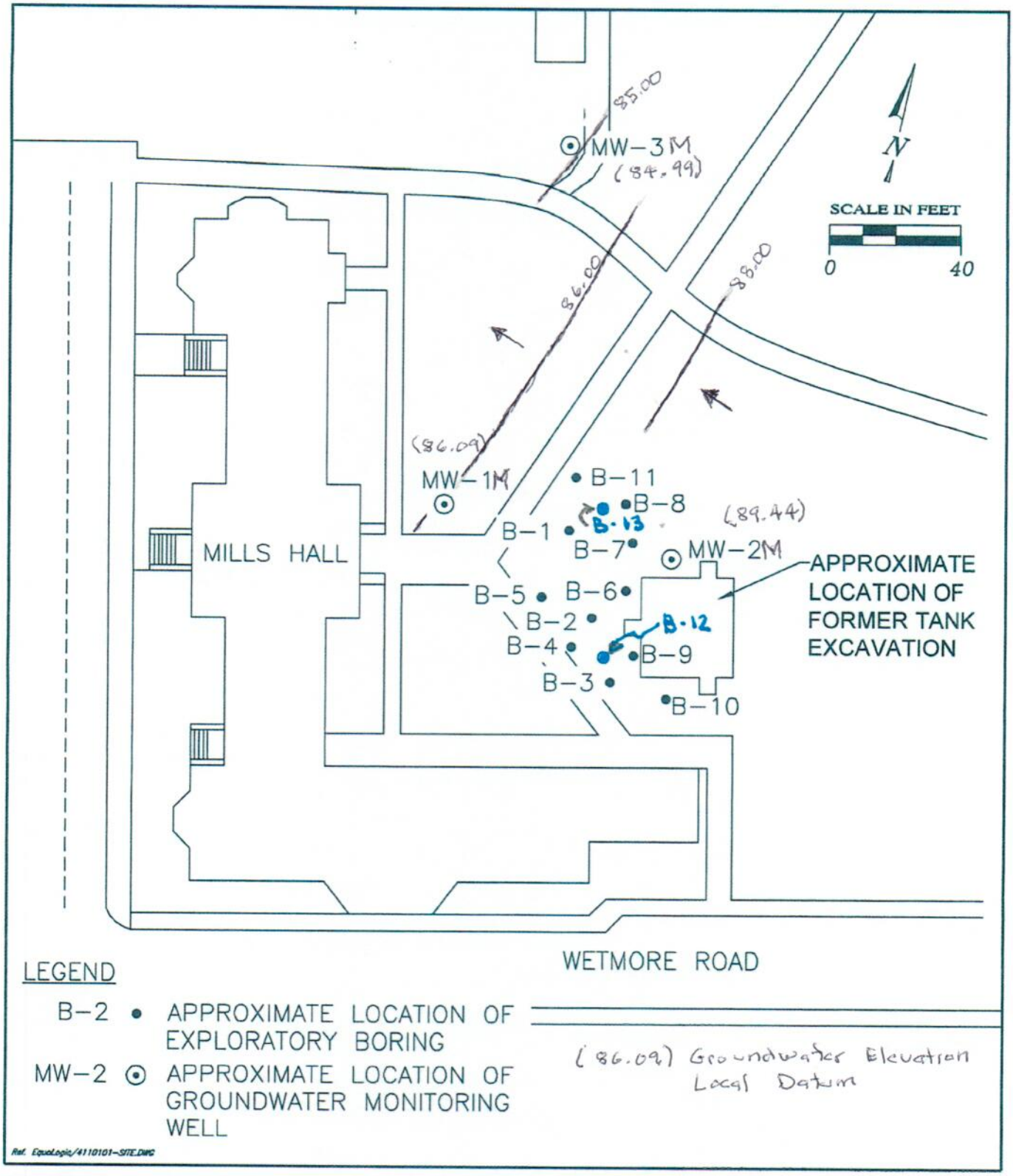
Ref. EquoLogic/411.01.01-SITE.DWG

EquoLogic

SITE PLAN CORPORATION YARD

MILLS COLLEGE
5000 MacArthur Boulevard
Oakland, California

FIGURE: 2
PROJECT: 411.01.01



EquoLogic

SITE PLAN TOYON MEADOWS

MILLS COLLEGE
5000 MacArthur Boulevard
Oakland, California

FIGURE:
3
PROJECT:
411.01.01

ATTACHMENT A

Field Data Sheets

WELL GAUGING DATA

Project # 130422-BP2 Date 4-22-13 Client EQUILON GLC GROUP

Site Mills, College 5000 Mac Arthur 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 TOC	Notes
MW-1M	1045	2					13.41	20.08		
MW-2M	1040	2					10.56	19.62		
MW-3M	1035	2					13.05	17.12		
MW-1	1229	2					17.32	32.91		
MW-2	1225	2					17.33	34.14		
MW-3	1233	2					17.21	32.65		

WELLHEAD INSPECTION CHECKLIST

Client EQUILON GIC GROUP Date 4-22-13

Site Address Mills College 5000 Mac Arthur Blvd Oakland

Job Number 130422-BP1 Technician BP

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-1M	X							
MW-2M	X							
MW-3M	X			X				
MW-1	X			X				
MW-2	X	X		X				
MW-3	X							

NOTES: MW-1M: lock rusted, MW-2M: -3/3 bolts MW-3M: casing bent

WELL MONITORING DATA SHEET

Project #: 130422-B82	Client: EQUOCOGIC GROUP
Sampler: BP	Date: 4-22-13
Well I.D.: MW-1M	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 20.08	Depth to Water (DTW): 13.41
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]: 14.74	

Purge Method: Bailer; ~~Disposable Bailer~~; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: Bailer; (Disposable Bailer); Extraction Port; Dedicated Tubing; Other:_____

1.1 (Gals.) X	3	= 3.3 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1052	17.9	6.98	1612	254	1.1	
1055	16.8	6.90	1596	432	2.2	cloudy
1058	16.5	6.89	1610	697	3.3	cloudy brown

Did well dewater? Yes (No) Gallons actually evacuated: 3.3

Sampling Date: 4-22-13 Sampling Time: 1105 Depth to Water: 13.60

Sample I.D.: MW-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 #: 130422-BP1	Client: EQUILON GIC GROUP
Sampler: BP	Date: 4-22-13
Well I.D.: MW-2M	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 19.52	Depth to Water (DTW): 10.56
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]: 12.35	

Purge Method: Bailer; (Disposable Bailer); Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other ___

Sampling Method: Bailer; (Disposable Bailer); Extraction Port; Dedicated Tubing; Other: ___

1.4 (Gals.) X 3 = 4.2 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1151	17.0	7.10	1677	640	1.4	
1154	16.4	7.06	1476	595	2.8	
1157	16.2	7.08	1461	>1000	4.2	

Did well dewater? Yes (No) Gallons actually evacuated: 4.2

Sampling Date: 4-22-13 Sampling Time: 1205 Depth to Water: 10.88

Sample I.D.: MW-2M Laboratory: Kiff CalScience Other Acutest

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 #: 130422-BP2	Client: EQUILOGIC GROUP
Sampler: BP	Date: 4-22-13
Well I.D.: MW-3M	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 17.12	Depth to Water (DTW): 13.05
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]: 13.86	

Purge Method: Bailer; (Disposable Bailer); Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other ____

Sampling Method: Bailer; (Disposable Bailer); Extraction Port; Dedicated Tubing; Other: ____

0.7 (Gals.) X 3 = 2.1 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1118	17.4	6.93	1853	360	0.7	cloudy
1121	16.4	6.85	2117	422	1.4	↓
1124	16.2	6.85	2094	510	2.1	↓

Did well dewater? Yes (No) Gallons actually evacuated: 2.1

Sampling Date: 4-22-13 Sampling Time: ~~13.0~~ 1130 (PP) Depth to Water: 13.64

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

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 #: 130422-BP1	Client: EQUILON GROUP
Sampler: BP	Date: 4-22-13
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 32.91	Depth to Water (DTW): 17.32
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]: 20.43	

Purge Method: Bailer; ~~Disposable Bailer~~; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: Bailer; ~~Disposable Bailer~~; Extraction Port; Dedicated Tubing; Other: _____

2.5 (Gals.) X	3	=	7.5 Gals.
1 Case Volume	Specified Volumes		Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1322	18.9	6.87	443.6	474	2.5	grey, cloudy
1326	18.9	6.87	743.0	612	5.0	↓
1330	19.0	6.89	740.5	831	7.5	↓

Did well dewater? Yes (No) Gallons actually evacuated: ~~13~~ (BD) 7.5

Sampling Date: 4-22-13 Sampling Time: 1333 Depth to Water: 18.26

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 #: 130422-BP2	Client: EQUILOGIC GROUP
Sampler: BP	Date: 4-22-13
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 34.14	Depth to Water (DTW): 17.33
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]: 20.69	

Purge Method: Bailer; (Disposable Bailer); Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: Bailer; (Disposable Bailer); Extraction Port; Dedicated Tubing; Other: _____

2.7 (Gals.) X 3 = 8.1 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1245	20.7	7.11	748.1	>1000	2.7	brown, cloudy
1250	20.5	7.08	731.8	>1000	5.4	↓
1256	20.1	7.12	717.8	>1000	8.1	↓
					NOT AT 80%, DTW: 22.60	
					SHORT WAIT	

Did well dewater? Yes (No) Gallons actually evacuated: 8.1

Sampling Date: 4-22-13 Sampling Time: 1302 Depth to Water: 20.60

Sample I.D.: MW-2 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 #: 130422-BP2	Client: EQUOLOGIC GROUP
Sampler: BP	Date: 4-22-13
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 32.65	Depth to Water (DTW): 17.21
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]: 20.29	

Purge Method: Bailer; (Disposable Bailer); Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: Bailer; (Disposable Bailer); Extraction Port; Dedicated Tubing; Other: _____

2.5 (Gals.) X 3 = 7.5 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1345	19.9	6.81	558.4	394	2.5	
1350	19.0	6.77	557.2	363	5.0	
1355	19.1	6.82	587.4	315	7.5	

Did well dewater? Yes (No) Gallons actually evacuated: 7.5

Sampling Date: 4-22-13 Sampling Time: 1359 Depth to Water: 19.89

Sample I.D.: MW-3 Laboratory: Kiff CalScience Other Accutest

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

EB I.D. (if applicable): Purge Water @ Time 1415 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

ATTACHMENT B

Laboratory Certified Report

Northern California
ACCUTEST
LABORATORIES

04/29/13

Technical Report for

EquoLogic

Mills College - 5000 MacArthur Blvd., Oakland, CA

Accutest Job Number: C27315

Sampling Date: 04/22/13

Report to:

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

ATTN: Lee Dooley

Total number of pages in report: **25**

ACCREDITED IN ACCORDANCE WITH nelac

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.

James J. Rhudy
Lab Director

Client Service contact: Nutan Kabir 408-588-0200

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

Table of Contents

Sections: 1 2 3 4 5 6

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Sample Summary

EquoLogic

Job No: C27315

Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
C27315-1	04/22/13	11:05	BTS	04/22/13	AQ	Ground Water	MW-1M
C27315-2	04/22/13	12:05	BTS	04/22/13	AQ	Ground Water	MW-2M
C27315-3	04/22/13	11:30	BTS	04/22/13	AQ	Ground Water	MW-3M
C27315-4	04/22/13	13:33	BTS	04/22/13	AQ	Ground Water	MW-1
C27315-5	04/22/13	13:02	BTS	04/22/13	AQ	Ground Water	MW-2
C27315-6	04/22/13	13:59	BTS	04/22/13	AQ	Ground Water	MW-3

Summary of Hits

Job Number: C27315
Account: EquoLogic
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA
Collected: 04/22/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C27315-1	**MW-1M**					
TPH (C10-C28)		0.0255 J	0.096	0.024	mg/l	SW846 8015B M
C27315-2	**MW-2M**					
TPH (C10-C28)		0.136	0.095	0.024	mg/l	SW846 8015B M
C27315-3	**MW-3M**					
TPH (C10-C28)		0.0756 J	0.095	0.024	mg/l	SW846 8015B M
C27315-4	**MW-1**					
Benzene		3.6	1.0	0.20	ug/l	SW846 8260B
Ethylbenzene		0.81 J	1.0	0.20	ug/l	SW846 8260B
1,2-Dichloroethane		0.55 J	1.0	0.20	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.33 J	1.0	0.20	ug/l	SW846 8260B
TPH-GRO (C6-C10)		49.1 J	50	25	ug/l	SW846 8260B
C27315-5	**MW-2**					
Tert-Butyl Alcohol		9.1 J	10	2.4	ug/l	SW846 8260B
C27315-6	**MW-3**					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-1M		
Lab Sample ID:	C27315-1	**Date Sampled:**	04/22/13
Matrix:	AQ - Ground Water	**Date Received:**	04/22/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R16394.D	1	04/24/13	BD	n/a	n/a	VR593
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	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	94%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

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		
Lab Sample ID:	C27315-1	**Date Sampled:**	04/22/13
Matrix:	AQ - Ground Water	**Date Received:**	04/22/13
Method:	SW846 8015B M SW846 3510C	**Percent Solids:**	n/a
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH302640.D	1	04/25/13	AG	04/24/13	OP7868	GHH964
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0255	0.096	0.024	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	62%		32-124%

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		
Lab Sample ID:	C27315-2	**Date Sampled:**	04/22/13
Matrix:	AQ - Ground Water	**Date Received:**	04/22/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R16395.D	1	04/24/13	BD	n/a	n/a	VR593
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	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	93%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

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		
Lab Sample ID:	C27315-2	**Date Sampled:**	04/22/13
Matrix:	AQ - Ground Water	**Date Received:**	04/22/13
Method:	SW846 8015B M SW846 3510C	**Percent Solids:**	n/a
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH302641.D	1	04/25/13	AG	04/24/13	OP7868	GHH964
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)	0.136	0.095	0.024	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	53%		32-124%

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-3M		
Lab Sample ID:	C27315-3	**Date Sampled:**	04/22/13
Matrix:	AQ - Ground Water	**Date Received:**	04/22/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R16396.D	1	04/24/13	BD	n/a	n/a	VR593
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	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	94%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

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-3M		
Lab Sample ID:	C27315-3	**Date Sampled:**	04/22/13
Matrix:	AQ - Ground Water	**Date Received:**	04/22/13
Method:	SW846 8015B M SW846 3510C	**Percent Solids:**	n/a
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH302642.D	1	04/25/13	AG	04/24/13	OP7868	GHH964
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)	0.0756	0.095	0.024	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	45%		32-124%

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-1		
Lab Sample ID:	C27315-4	**Date Sampled:**	04/22/13
Matrix:	AQ - Ground Water	**Date Received:**	04/22/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R16397.D	1	04/24/13	BD	n/a	n/a	VR593
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	3.6	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	0.81	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	0.55	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	0.33	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)	49.1	50	25	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

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-2		
Lab Sample ID:	C27315-5	**Date Sampled:**	04/22/13
Matrix:	AQ - Ground Water	**Date Received:**	04/22/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R16398.D	1	04/24/13	BD	n/a	n/a	VR593
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	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	9.1	10	2.4	ug/l	J
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

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-3		
Lab Sample ID:	C27315-6	**Date Sampled:**	04/22/13
Matrix:	AQ - Ground Water	**Date Received:**	04/22/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Mills College - 5000 MacArthur Blvd., Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R16399.D	1	04/24/13	BD	n/a	n/a	VR593
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	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	96%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

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

Northern California ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

EQUOCAMS4745

BLAINE TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 130422-BP2

CLIENT: Equologic Group

SITE: Mills College
5000 MacArthur Blvd.
Oakland, CA

C = COMPOSITE ALL CONTAINERS

CONDUCT ANALYSIS TO DETECT

LAB: Accutest C97315 DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ RWQCB REGION
☐ LIA
☐ OTHER

SPECIAL INSTRUCTIONS

Invoice to: Equologic Group
Attn: Lee Dooley
Report to: Lee Dooley

SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H2O	CONTAINERS TOTAL		TPH-D (silica gel cleanup)	TPH-G	BTEX	MTBE	5 OXYs	1,2 DCA & 1,2 Dibromoethane	Napthalene	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-1M	4/22/13	1105	W	03	3 VOA 2 Amber	✓	✓	✓	✓	✓	✓	✓				-1
MW-2M	4/22/13	1205	W	05	"	✓		✓	✓	✓	✓	✓				-2
MW-3M	4/22/13	1138 1153 DUP	W	05	"	✓		✓	✓	✓	✓	✓				-3
MW-1	4/22/13	1333	W	3	VOA		✓	✓	✓	✓	✓	✓				-4
MW-2	4/22/13	1302	W	3	VOA		✓	✓	✓	✓	✓	✓				-5
MW-3	4/22/13	1359	W	3	VOA		✓	✓	✓	✓	✓	✓				-6

SAMPLING COMPLETED: DATE 4.22.13 TIME 1420
SAMPLING PERFORMED BY: Ben Pavell

RESULTS NEEDED NO LATER THAN: Standard TAT

		DATE	TIME		DATE	TIME
RELEASED BY		4.22.13	1530	RECEIVED BY	04/22/13	1530
RELEASED BY				RECEIVED BY		
RELEASED BY				RECEIVED BY		

SHIPPED VIA | DATE SENT | TIME SENT | COOLER # 1 | 2.6°C

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C27315: Chain of Custody
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ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C27315 **Client:** EQUOLOGIC GROUP **Project:** MILLS COLLEGE

Date / Time Received: 4/22/2013 **Delivery Method:** Client **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (2.6/2.6); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☐		☑	3. COC Present:	☑		☐
2. Custody Seals Intact:	☐		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:408.588.0200

2105 Lundy Avenue
F: 408.588.0201

San Jose, CA 95131
www/accutest.com

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C27315: Chain of Custody
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Northern California ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Blank Spike/Blank Spike Duplicate Summary

Job Number: C27315
Account: EQUOCAMS EquoLogic
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR593-BS	R16389.D	1	04/24/13	BD	n/a	n/a	VR593
VR593-BSD	R16390.D	1	04/24/13	BD	n/a	n/a	VR593

The QC reported here applies to the following samples: Method: SW846 8260B

C27315-1, C27315-2, C27315-3, C27315-4, C27315-5, C27315-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	17.4	87	18.6	93	7	77-122/25
106-93-4	1,2-Dibromoethane	20	17.8	89	19.0	95	7	75-135/17
107-06-2	1,2-Dichloroethane	20	18.4	92	19.6	98	6	71-131/17
108-20-3	Di-Isopropyl ether	20	16.6	83	17.8	89	7	68-129/17
100-41-4	Ethylbenzene	20	18.7	94	19.9	100	6	76-126/17
637-92-3	Ethyl Tert Butyl Ether	20	18.0	90	19.3	97	7	75-134/17
1634-04-4	Methyl Tert Butyl Ether	20	18.3	92	19.6	98	7	73-132/17
91-20-3	Naphthalene	20	17.7	89	19.7	99	11	70-136/20
994-05-8	Tert-Amyl Methyl Ether	20	18.8	94	20.1	101	7	73-133/17
75-65-0	Tert-Butyl Alcohol	100	106	106	115	115	8	60-149/26
108-88-3	Toluene	20	17.9	90	19.1	96	6	75-122/17
1330-20-7	Xylene (total)	60	55.1	92	58.4	97	6	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	95%	96%	70-130%
2037-26-5	Toluene-D8	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	100%	100%	70-130%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C27315
Account: EQUOCAMS EquoLogic
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR593-LCS	R16391.D	1	04/24/13	BD	n/a	n/a	VR593

The QC reported here applies to the following samples: Method: SW846 8260B

C27315-1, C27315-2, C27315-3, C27315-4, C27315-5, C27315-6

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	114	91	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C27315
Account: EQUOCAMS EquoLogic
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C27315-1MS	R16411.D	1	04/24/13	BD	n/a	n/a	VR593
C27315-1MSD	R16412.D	1	04/24/13	BD	n/a	n/a	VR593
C27315-1	R16394.D	1	04/24/13	BD	n/a	n/a	VR593

The QC reported here applies to the following samples: Method: SW846 8260B

C27315-1, C27315-2, C27315-3, C27315-4, C27315-5, C27315-6

CAS No.	Compound	C27315-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	17.3	87	17.2	86	1	77-122/16
106-93-4	1,2-Dibromoethane	ND		20	17.6	88	17.4	87	1	75-135/17
107-06-2	1,2-Dichloroethane	ND		20	18.1	91	18.1	91	0	71-131/17
108-20-3	Di-Isopropyl ether	ND		20	16.4	82	16.6	83	1	68-129/17
100-41-4	Ethylbenzene	ND		20	18.7	94	18.4	92	2	76-126/17
637-92-3	Ethyl Tert Butyl Ether	ND		20	17.9	90	18.1	91	1	75-134/17
1634-04-4	Methyl Tert Butyl Ether	ND		20	18.0	90	18.2	91	1	73-132/17
91-20-3	Naphthalene	ND		20	16.9	85	17.9	90	6	70-136/20
994-05-8	Tert-Amyl Methyl Ether	ND		20	18.5	93	18.8	94	2	73-133/17
75-65-0	Tert-Butyl Alcohol	ND		100	99.3	99	103	103	4	60-149/26
108-88-3	Toluene	ND		20	18.1	91	17.6	88	3	75-122/17
1330-20-7	Xylene (total)	ND		60	52.9	88	52.0	87	2	77-125/17

CAS No.	Surrogate Recoveries	MS	MSD	C27315-1	Limits
1868-53-7	Dibromofluoromethane	96%	96%	94%	70-130%
2037-26-5	Toluene-D8	100%	99%	102%	70-130%
460-00-4	4-Bromofluorobenzene	101%	99%	99%	70-130%

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: C27315
Account: EQUOCAMS EquoLogic
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7868-MB	HH302637.D	1	04/25/13	AG	04/24/13	OP7868	GHH964

The QC reported here applies to the following samples: Method: SW846 8015B M

C27315-1, C27315-2, C27315-3

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	59%	32-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C27315
Account: EQUOCAMS EquoLogic
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7868-BS	HH302638.D	1	04/25/13	AG	04/24/13	OP7868	GHH964
OP7868-BSD	HH302639.D	1	04/25/13	AG	04/24/13	OP7868	GHH964

The QC reported here applies to the following samples: Method: SW846 8015B M

C27315-1, C27315-2, C27315-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.577	58	0.590	59	2	38-115/22

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	68%	69%	32-124%

* = Outside of Control Limits.

Method Blank Summary

Job Number: C27315
Account: EQUOCAMS EquoLogic
Project: Mills College - 5000 MacArthur Blvd., Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR593-MB	R16392.D	1	04/24/13	BD	n/a	n/a	VR593

The QC reported here applies to the following samples: Method: SW846 8260B

C27315-1, C27315-2, C27315-3, C27315-4, C27315-5, C27315-6

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	90%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%