LOUIS BADERTSCHER
5625 N. HIGHWAY 66
KINGMAN, AZ 86401

RECEIVED
By Alameda County Environmental Health at 3:13 pm, Nov 17, 2014

November 11, 2014

Mr. Keith Nowell
ACEHCSA
1131 Harbor Bay Parkway
Alameda, CA 94502-6540

SUBJECT: 4TH QUARTER 2014 GROUNDWATER MONITORING
at Scooter Wilson - 3600 MacArthur Blvd., Oakland, CA
Fuel Leak Case RO280

Dear Mr. Nowell,

Enclosed, please find a copy of the October 30, 2014 subject 4th Quarter 2014 Groundwater Monitoring report prepared by my consultant, Enviro Soil Tech Consultants.

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

Sincerely,

Louis Badertscher

LOUIS BADERTSCHER

File No. 10-14-870-GWS

FOURTH QUARTER 2014 GROUNDWATER MONITORING FOR THE PROPERTY LOCATED AT 3600 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA OCTOBER 30, 2014

PREPARED FOR:
MR. LOUIS BADERTSCHER
5625 N. HIGHWAY 66
KINGMAN, ARIZONA 86401

BY:
ENVIRO SOIL TECH CONSULTATNS
131 TULLY ROAD
SAN JOSE, CALIFORNIA 95111

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ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants
131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111
Tel: (408) 297-1500 Fax: (408) 694-3447
Email: info@envirosoiltech.com

October 30, 2014

File No. 10-14-870-GWS

Mr. Louis Badertscher
5625 N. Highway 66
Kingman, Arizona 86401

SUBJECT: FOURTH QUARTER 2014 GROUNDWATER MONITORING REPORT FOR THE PROPERTY
Located at 3600 MacArthur Boulevard, in Oakland, California

Dear Mr. Badertscher,

Thank you for retaining Enviro Soil Tech Consultants to continue the investigation of your property at 3600 MacArthur Boulevard in Oakland, California. We have completed groundwater-monitoring activities for the 4th quarter of 2014 and are pleased to transmit this report of our findings.

If you have any questions or require additional information, please feel free to contact our office at (408) 297-1500 or via email at info@envirosoiltech.com.

Sincerely,
ENVIRO SOIL TECH CONSULTANTS

FRANK HAMEDI-FARD
GENERAL MANAGER

VICTOR B. CHERVEN, Ph. D.
REGISTERED GEOLOGIST #3

PROFESSIONAL GEOLOGIST
VICTOR B. CHERVEN
No. 3475
STATE OF CALIFORNIA

SITE LOCATION AND DESCRIPTION

The site is located at the intersection of MacArthur Boulevard and Magee Avenue in Oakland, California (Figure 1). It is the location of an automotive service station that was operated by Phillips Petroleum prior to 1973, and by an independent distributor until 1983. Both gasoline and diesel fuel were dispensed at the site. After that, it became an automotive service garage and was operated until about 2005.

The property is level, and at an elevation of approximately 200 feet above sea level. Surrounding parcels are zoned for commercial and residential use. The current owner intends to redevelop the site after this environmental investigation has been completed.

Figure 2 is a site plan that shows the location of the station/garage building and the former locations of the underground fuel storage tanks and dispensers. It also shows the locations of borings and groundwater monitoring wells that were installed in 1998 and 2006 to assess the impact to soil and groundwater beneath the site.

PREVIOUS ENVIRONMENTAL INVESTIGATIONS

The UST's were removed in 1994 by SEMCO. Two of the tanks stored gasoline and were 8,000 gallons in capacity. A 6,000-gallon diesel tank and a 100-gallon waste-oil tank were also removed. Soil and groundwater samples were collected during the removals and analyzed for Total Petroleum Hydrocarbons as gasoline and diesel (TPHg and TPHd), volatile aromatic hydrocarbons (Benzene, Toluene, Ethylbenzene, and Xylene: BTEX), and a sample from the waste-oil tank was analyzed for TPH as motor oil, volatile organic compounds, and semi-volatile organic compounds. The water samples were impacted by both TPHg and TPHd, and one of the sidewall samples from the fuel tank excavation was also impacted by TPHg at a high concentration. Volatile aromatics were also detected in a few samples. No samples were collected from the piping trenches or dispenser areas during the UST removal.

SEMCO returned to the site in 1998 and drilled five borings, completing three of them as monitoring wells. Moderate to high concentrations of TPHg and BTEX were detected at a depth of 7 feet in B-1, B-2 (MW-1), and B-3 (MW-2). Concentrations were either low or below detection limits at a depth of 10 feet in all five borings. Gasoline and diesel were detected in the water sample from MW-1, but not in either of the other two wells.

Kodiak Consulting replaced SEMCO in 2006 to assess the extent of contamination and drilled eight more borings, including five borings south of MW-1. These five were located in the utility-line trenches along MacArthur Boulevard; the others were positioned nearer the former tanks. Moderate gasoline concentrations were detected in water samples from KB-3 and KB-4, and moderate to elevated concentrations in the motor-oil (heavy) range were reported in KB-2, KB-3, KB-7, and KB-8.

Groundwater sampling of the monitoring wells has been sporadic, (twice in 1999, once in 2000, twice in 2005, once in 2006 and 2008, and once in 2013). MW-1 has remained impacted by TPHg at concentrations ranging from about 2,000 to 6,000 µg/L, but reached a high of 14,000 µg/L in 2008. The other two wells have been below the 50 µg/L detection limit for TPHg and TPHd most of the time. The groundwater flow direction has fluctuated from southeast to west.

In 2013, RGA Environmental was retained to review the previous investigations, develop a conceptual model of the site, and identify gaps in the existing database that need to be corrected. RGA also monitored the wells in October of 2013. RGA's report included a work plan to address the data gaps, and Alameda County Environmental Health had approved the plan in April 2014. To date, the work has not been performed.

SCOPE OF WORK

After being retained by Mr. Badertscher, ESTC identified the following scope of work:

- Review and summarize previous work and reports
- Measure the water depth in each of the three monitoring wells, purge the standing water, and collect a water sample in a clean disposable bailer. Pour the samples into 40-ml glass vials and 1-liter amber bottles and preserve on ice for laboratory analysis.
- Analyze water samples for TPHg, TPHd, BTEX, and gasoline oxygenates using EPA methods 8015 and 8260.
- Construct a groundwater elevation map and hydrocarbon isocontour maps for selected analytes in groundwater.
- Prepare a report of the investigation in preparation for completing the previously approved scope of work for further assessment.

SAMPLING METHODS

ESTC monitored the site on October 13 and collected water samples. The samples were decanted into 40-ml vials and preserved in a cooled ice chest for laboratory analysis. Prior to sampling, the field technician measured the depth of the static water level in each well and then purged three casing volumes of water. The purged water was stored in 55-gallon drums on site.

LABORATORY ANALYSIS

The samples were transported under chain-of-custody to Curtis & Tompkins, Ltd. laboratories for analysis. They were analyzed for TPHg, TPHd, and TPHmo using EPA method 8015 and for BTEX and gasoline oxygenates using EPA 8260. The laboratory reports are in Appendix "F", and a summary of the laboratory data is in Tables 1 and 2.

RESULTS

DEPTH TO GROUNDWATER AND GROUNDWATER GRADIENT

The depth to groundwater was slightly greater than 4 feet, meaning that the top of the screened interval was just above the static water level. After purging, samples were collected when the water level recovered to its static level. The measured depths were subtracted from the casing elevations to determine the elevation of the water table, and the results are contoured in Figure 3.

The water table continues to slope in a west-southwest direction at this time, indicating that groundwater is likely to be flowing across MacArthur Boulevard. As there are no monitor wells on the west side of the street, this cannot be confirmed, but because the previous investigation by Kodiak Consulting indicated that the utility lines along the east side of the street are probably not preferred flow paths, it is unlikely that they have a significant effect on the local flow direction.

LABORATORY RESULTS

Hydrocarbon concentrations are tabulated in Tables 1 and 2 and contoured in Figures 4 through 7. The laboratory detected TPHg in MW-1 at a much lower concentration than had been reported in 2008 by Kodiak Consulting, but at a higher concentration than reported by RGA in 2013. The TPHd concentration was slightly higher, but the BTEX concentrations were comparable (Table 1). Such fluctuations from year to year and season to season are commonplace at all sites. As in the past, neither MW-2 nor MW-3 were impacted, except for MTBE in MW-3 at a concentration of 3.7 µg/L.

RGA correctly concluded that the full extent of groundwater contamination west of MacArthur Boulevard has not been defined. However, their conclusion that the contamination that had been detected in boring B-15 on the west side of the street by consultants for Chevron is premature and was based on weak evidence. Therefore, the contours in the hydrocarbon isoconcentration maps suggest that a plume of contaminated groundwater extends downgradient from MW-1 an unknown distance, and we have terminated them in the street until additional drilling has been completed to provide more information about the magnitude the impact west of the street.

RECOMMENDATIONS

The present data suggest that the impact to groundwater beneath the site is localized in the vicinity of the former dispenser island and is fairly minor, but could extend to the west or southwest (downgradient) of the site beneath MacArthur Boulevard. We recommend proceeding with the investigation proposed by RGA Environmental and approved by ACDEH. The investigation should take place early in 2015 so that the deadline of July 2015 set by ACDEH can be met.

Groundwater monitoring should continue on a semi-annual schedule. The next monitoring event should be done in April 2015.

LIMITATIONS

This report and the associated work have been provided in accordance with the general principles and practices currently employed in the environmental consulting profession. The contents of this report reflect the conditions of the site at this particular time. The findings of this report are based on:

1) The observations of field personnel
2) The results of laboratory analyses performed by a state-certified laboratory.

It is possible that variations in the soil and groundwater could exist beyond the points explored in this investigation. Also, changes in groundwater conditions of a property can occur with the passage of time due to variations in rainfall, temperature, regional water usage and other natural processes or the works of man on this property or adjacent property. No other warranties, expressed or implied as to the professional advice provided are made.

File No. 10-14-870-GWS
October 30, 2014

A P P E N D I X "A"

TABLES

ENVIRO SOIL TECH CONSULTANTS

File No. 10-14-870-GWS
October 30, 2014

TABLE 1
GROUNDWATER MONITORING DATA (feet)
AND ANALYTICAL RESULTS (µg/L)

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	TPHd	TPHmo	TPHbo	B	T	E	X	MTBE	Other VOCs
11/12/98 **a**	MW-1 (201.38)✶	14	4-14	3.24*	198.14	No sheen or odor	6200	540	ND <500	NA	420	47	ND <0.5	210	ND <0.5	Not Analyzed
4/06/99**a**				1.76*	199.62	No sheen Slight H/C odor	4400	ND <50	NA	NA	320	33	240	240	ND <0.5	Not Analyzed
10/01/99 **a**				3.51*	197.87	No sheen Slight odor	2600	190**e**	NA	NA	290	20	190	46	ND <0.5	Not Analyzed
1/31/00**a** ✶				1.88*	199.50	--	--	--	--	--	--	--	--	--	--	--
6/30/00**b**				2.98*	198.42	No sheen Strong odor	4100	NA	NA	NA	260	69	320	510	ND <0.5	Not Analyzed
7/14/00**b** ★				--	--	--	--	1500**e**	--	--	--	--	--	--	--	--
9/19/05**c**				3.68*	197.70	No sheen Strong H/C odor	2700	ND <50	ND <250	NA	69	6.5	14	3.3	ND <5.0	None Detected<2.5
12/23/05 **c**				1.65*	199.73	Slight sheen Petroleum odor	2100	ND <50	ND <200	NA	75	7.0	25	5.6	ND <5.0	None Detected<5.0
3/28/06**c**				1.07*	200.31	Slight sheen H/C odor	3600	ND <260	ND <1000	NA	140	27	170	160	ND <5	None Detected<2.5
5/06/08**c**				3.49*	197.89	Slight sheen H/C odor	14000	6800**e**	280	NA	420	120	760	790	ND <5.0	None Detected<5.0
10/22/13 **d**✶				4.12♦	197.26	Light sheen Hydrocarbon odor	NS	NS	NS	NS	NS	NS	NS	NS	NS	Not Sampled
10/25/13 **d**				4.15♦	197.23	No sheen or odor	160	ND <50	ND <250	ND <100	2.9	ND <0.50	ND <0.50	ND <0.50	ND <0.50	None Detected<0.50
10/13/14				4.20♦	197.18	No sheen Slight petroleum odor	1000**f**	97**f**	ND <300	NA	6.8	ND <0.5	ND <0.5	ND <0.5	ND <0.5	Isopropylbenzene 1.9 Propylbenzene 3.6 sec-Butylbenzene 0.7 n-Butylbenzene 1.1
11/12/98 **a**	MW-2 (201.87) ✶	14	4-14	2.85*	199.02	No sheen or odor	ND <50	ND <50	ND <500	NA	ND <0.50	ND <0.50	ND <0.50	ND <1	ND <0.50	Not Analyzed
4/06/99**a**				1.43*	200.44	No sheen or odor	ND <50	ND <50	NA	NA	ND <0.50	ND <0.50	ND <0.50	ND <1	ND <0.50	Not Analyzed

File No. 10-14-870-GWS
October 30, 2014

TABLE 1 CONT'D
GROUNDWATER MONITORING DATA (feet)
AND ANALYTICAL RESULTS (µg/L)

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	TPHd	TPHmo	TPHbo	B	T	E	X	MTBE	Other VOCs
10/01/99 **a**	MW-2 (201.87) ✶	14	4-14	3.29*	198.58	No sheen or odor	ND <50	110**e**	NA	NA	ND <0.50	ND <0.50	ND <0.50	ND <1	ND <0.50	Not Analyzed
1/31/00**a** ✶				1.61	200.26	--	--	--	--	--	--	--	--	--	--	--
6/30/00**b**				2.74*	199.13	No sheen or odor	130	NA	NA	NA	0.7	ND <0.50	1.0	2.0	ND <0.50	Not Analyzed
7/14/00**b** ★				--	--	--	--	ND <50**e**	--	--	--	--	--	--	--	--
9/19/05**c**				3.64*	198.23	No sheen or odor	ND <25	ND <50	ND <250	NA	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	None Detected<0.50
12/23/05 **c**				1.44*	200.43	No sheen or odor	ND <25	ND <50	ND <200	NA	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	None Detected<0.50
3/28/06**c**				0.91*	200.96	No sheen or odor	ND <25	ND <52	ND <210	NA	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	None Detected<0.50
5/06/08**c**				3.45*	198.42	No sheen or odor	ND <50	ND <50	ND <250	NA	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <5.0	TBA 2.5
10/22/13 **d**✶				4.09♦	197.78	No sheen or odor	NS	NS	NS	NS	NS	NS	NS	NS	NS	Not Sampled
10/25/13 **d**				4.41♦	197.46	No sheen or odor	ND <50	ND <50	ND <250	ND <100	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	None Detected<0.50
10/13/14				4.27♦	197.60	No sheen or odor	ND <50	ND <50	ND <300	NA	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	None Detected<0.5
11/12/98 **a**	MW-3 (202.11) ✶	14	4-14	3.43*	198.68	No sheen or odor	ND <50	ND <50	ND <500	NA	ND <0.50	ND <0.50	ND <0.50	ND <1	ND <0.50	Not Analyzed
4/06/99**a**				2.91*	199.20	No sheen or odor	ND <50	ND <50	NA	NA	ND <0.50	ND <0.50	ND <0.50	ND <1	ND <0.50	Not Analyzed
10/01/99 **a**				8.42♦	193.69	No sheen or odor	ND <50	80**e**	NA	NA	ND <0.50	ND <0.50	ND <0.50	ND <1	ND <0.50	Not Analyzed
1/31/00**a** ✶				1.12*	200.99	--	--	--	--	--	--	--	--	--	--	--

File No. 10-14-870-GWS
October 30, 2014

TABLE 1 CONT'D
GROUNDWATER MONITORING DATA (feet)
AND ANALYTICAL RESULTS (µg/L)

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	TPHd	TPHmo	TPHbo	B	T	E	X	MTBE	Other VOCs
6/30/00**b**	MW-3 (202.11) ✶	14	4-14	1.83*	200.28	No sheen or odor	130	NA	NA	NA	0.8	0.5	0.9	3.0	ND <0.50	Not Analyzed
7/14/00**b** ★				--	--	--	--	ND <50**e**	--	--	--	--	--	--	--	--
9/19/05**c**				7.18♦	194.93	No sheen or odor	ND <25	ND <50	ND <250	NA	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	None Detected<0.50
12/23/05 **c**				5.35♦	196.76	No sheen or odor	ND <25	ND <50	ND <200	NA	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	None Detected<0.50
3/28/06**c**				7.56♦	194.55	No sheen or odor	ND <25	ND <59	ND <240	NA	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	None Detected<0.050
5/06/08**c**				7.08♦	195.03	No sheen or odor	ND <50	ND <50	ND <250	NA	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.72	None Detected<0.50
10/22/13 **d**✶				7.21♦	194.90	No sheen or odor	NS	NS	NS	NS	NS	NS	NS	NS	NS	Not Sampled
10/25/13 **d**				7.52♦	194.59	No sheen or odor	ND <50	ND <50	ND <250	ND <100	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.85	None Detected<0.50
10/13/14				4.22♦	197.89	No sheen or odor	ND <50	ND <50	ND <300	NA	ND <0.5	ND <0.5	ND <0.5	ND <0.5	3.7	None Detected<0.5

TPHg - Total Petroleum Hydrocarbons as gasoline
TPHd - Total Petroleum Hydrocarbons as diesel
TPHmo - Total Petroleum Hydrocarbons as motor oil
TPHbo - Total Petroleum Hydrocarbons as bunker oil
BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
MTBE - Methyl Tertiary Butyl Ether
VOCs - Volatile Organic Compounds
TBA - Tertiary Butyl Alcohol
GW Elev. - Groundwater Elevation
Perf. - Perforation
NA - Not Analyzed
N/A - Not Available
ND - Not Detected (Below Laboratory Detection Limit)
NS - Not Sampled
✶ Surveyed on 11/12/98 by unnamed Registered Civil Engineer

TABLE 1 CONT'D
GROUNDWATER MONITORING DATA (feet)
AND ANALYTICAL RESULTS (µg/L)

a - Wells were monitored, measured, sampled and reported by HK2, Inc./SEMCO
b - Wells were monitored, measured, sampled and reported by North State Environmental (NSE)
c - Wells were monitored, measured, sampled and reported by Kodiak Consulting LLC
d - Wells were monitored, measured, sampled and reported by RGA Environmental
e - Chromatogram does not match diesel
★ TPHd samples expired prior to analysis that NSE had sampled on 6/30/00. NSE returned to site to collect samples for TPHd analysis without purging
✶ HKs, Inc./SEMCO measured the wells for depth-to-water only. No samples were taken for analyses
✶ Prior to well re-development
♦ Well screens are not submerged
* Well screens are submerged
f Samples exhibits chromatographic pattern which does not resemble standard

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TABLE 2
RECENT GROUNDWATER MONITORING DATA (feet)
AND ANALYTICAL RESULTS (µg/L)

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	TPHd	TPHmo	B	T	E	X	MTBE	Other VOCs by EPA 8260B
10/13/14	MW-1 (201.38)	14	4-14	4.20♦	197.18	No sheen Slight petroleum odor	1000**f**	97**f**	ND <300	6.8	ND <0.5	ND <0.5	ND <0.5	ND <0.5	Isopropylbenzene 1.9 Propylbenzene 3.6 sec-Butylbenzene 0.7 n-Butybenzene 1.1
10/13/14	MW-2 (201.87)	14	4-14	4.27♦	197.60	No sheen or odor	ND <50	ND <50	ND <300	ND <0.5	ND <0.5	ND <0.5	ND <0.5	ND <0.5	None Detected<0.5
10/13/14	MW-3 (202.11)	14	4-14	4.22♦	197.89	No sheen or odor	ND <50	ND <50	ND <300	ND <0.5	ND <0.5	ND <0.5	ND <0.5	3.7	None Detected<0.5

TPHg - Total Petroleum Hydrocarbons as gasoline
TPHd - Total Petroleum Hydrocarbons as diesel
TPHmo - Total Petroleum Hydrocarbons as motor oil
BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
MTBE - Methyl Tertiary Butyl Ether
VOCs - Volatile Organic Compounds
GW Elev. - Groundwater Elevation
Perf. - Perforation
ND - Not Detected (Below Laboratory Detection Limit)
♦ Well casings are not submerged
* Well casings are submerged
f Samples exhibits chromatographic pattern which does not resemble standard

TABLE 3
SUMMARY OF MONITORING WELL DATA
IN FEET

Well No.	Well Diameter (inch)	Depth of Well	Depth of Perforation	Depth of Blank	Depth of Cement	Depth of Bentonite	Depth of Sand
MW-1✦	2	14	4-14	0-4	0-2	2-3½	3½-14
MW-2✦	2	14	4-14	0-4	0-2	2-3½	3½-14
MW-3✦	2	14	4-14	0-4	0-2	2-3½	3½-14

✦ Well construction details in according to HK2, Inc./SEMCO installation report

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A P P E N D I X "B"

FIGURES

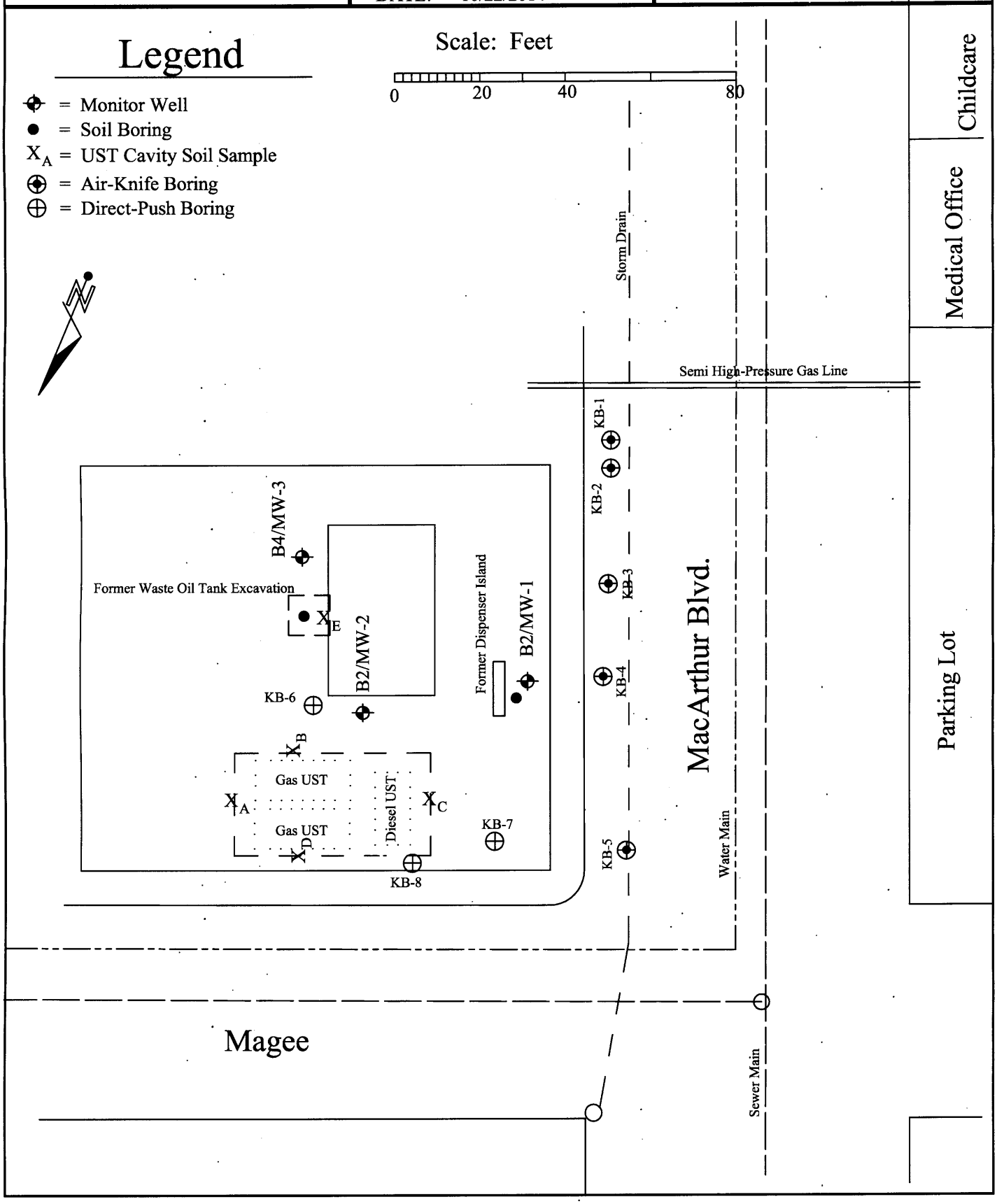
ENVIRO SOIL TECH CONSULTANTS

3600 MACARTHUR BLVD., OAKLAND, CA

ENVIRO SOIL TECH CONSULTANTS

Figure 1

Enviro Soil Tech Consultants	PROJECT	Figure 2
131 Tully Road San Jose, CA 95111	3600 MacArthur Boulevard Oakland, California PROJECT # 10-14-870-GWS DATE: 10/22/2014	Site Map Groundwater, 7/21/2014



Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95111	PROJECT 3600 MacArthur Boulevard Oakland, California PROJECT # 10-14-870-GWS DATE: 10/22/2014	Figure 3 Groundwater Elevation October 13, 2014

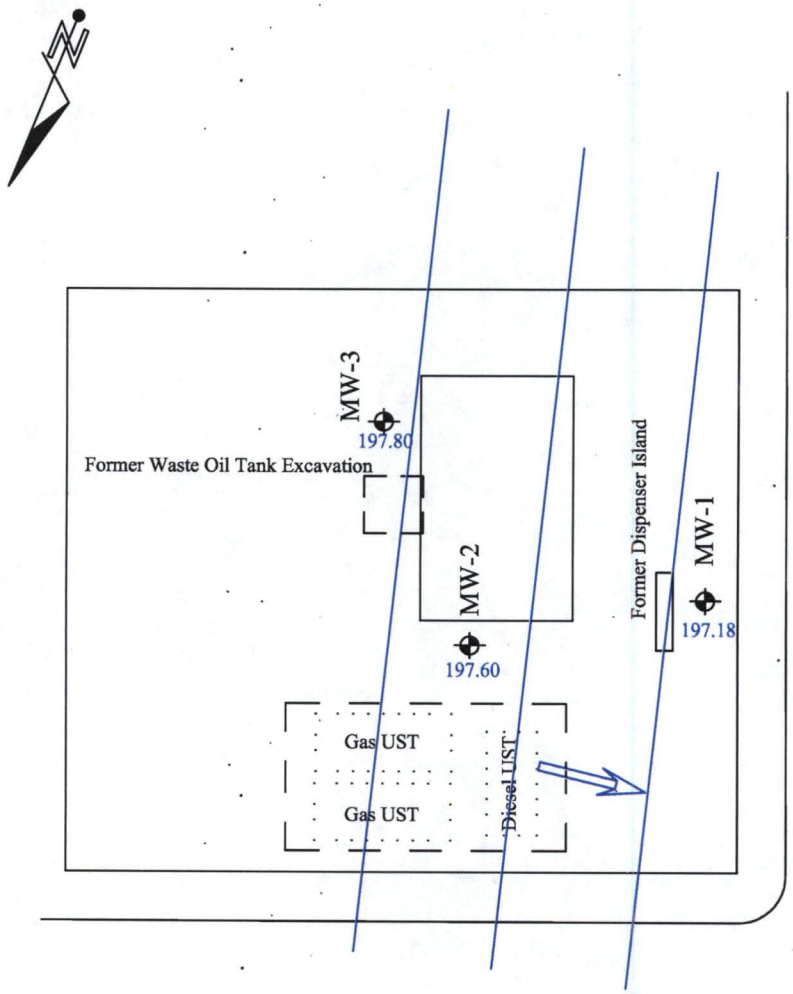
Legend

⊕ = Monitor Well

Scale: Feet

0 20 40 80

Contour Intervals are 0.25 feet



MacArthur Blvd.

Childcare

Medical Office

Parking Lot

Magee

Enviro Soil Tech Consultants	PROJECT	Figure 4
131 Tully Road San Jose, CA 95111	3600 MacArthur Boulevard Oakland, California PROJECT # 10-14-870-GWS DATE: 10/22/2014	Isocontours of TPHg in Groundwater, 10/13/2014

Legend

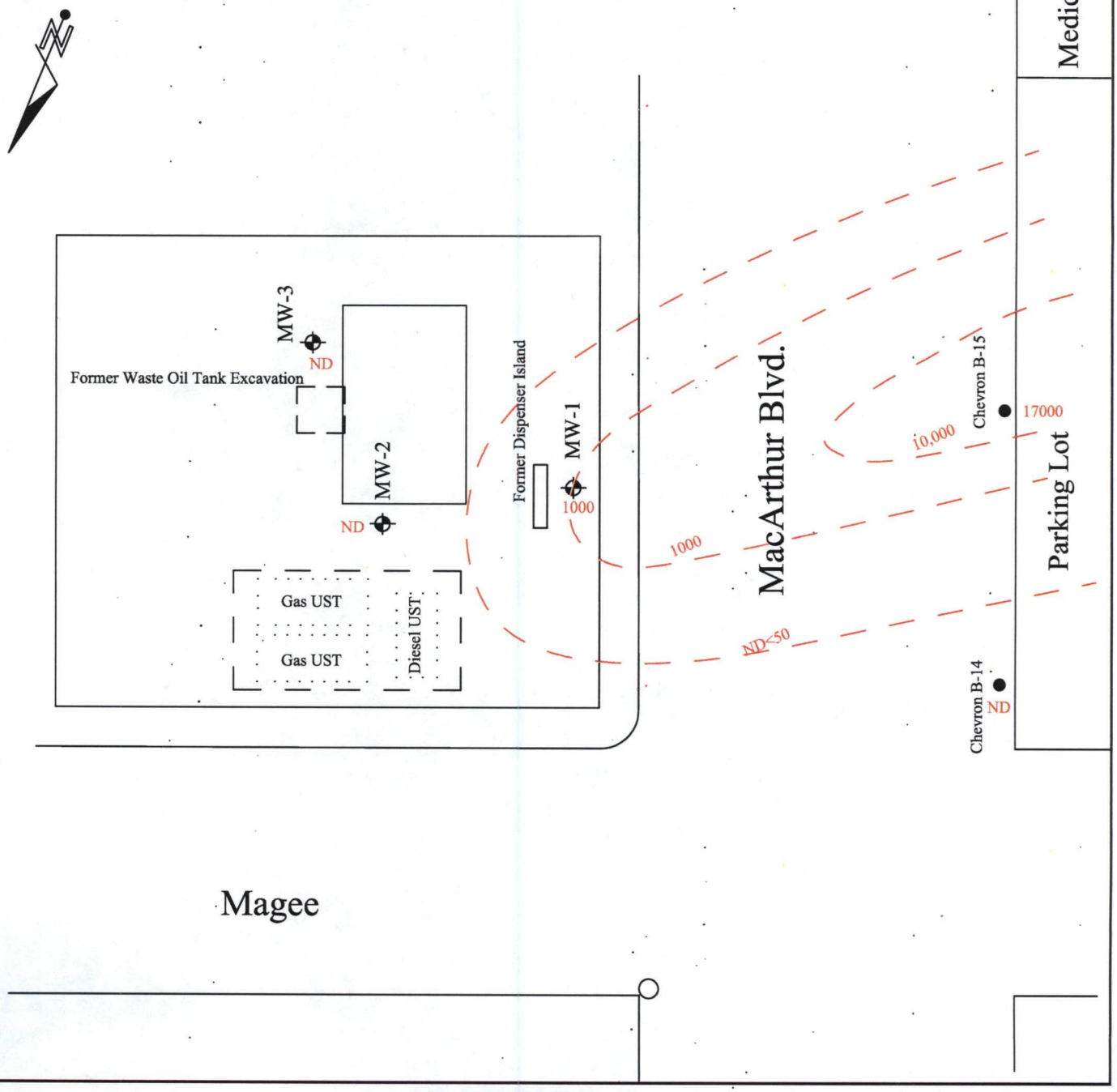
⊕ = Monitor Well

● = Soil Boring

Scale: Feet

0 20 40 80

Contour Intervals are Variablein ug/L



Enviro Soil Tech Consultants	PROJECT	Figure 5
131 Tully Road San Jose, CA 95111	3600 MacArthur Boulevard Oakland, California PROJECT # 10-14-870-GWS DATE: 10/22/2014	Isocontours of TPHd in Groundwater, 10/13/2014

Legend

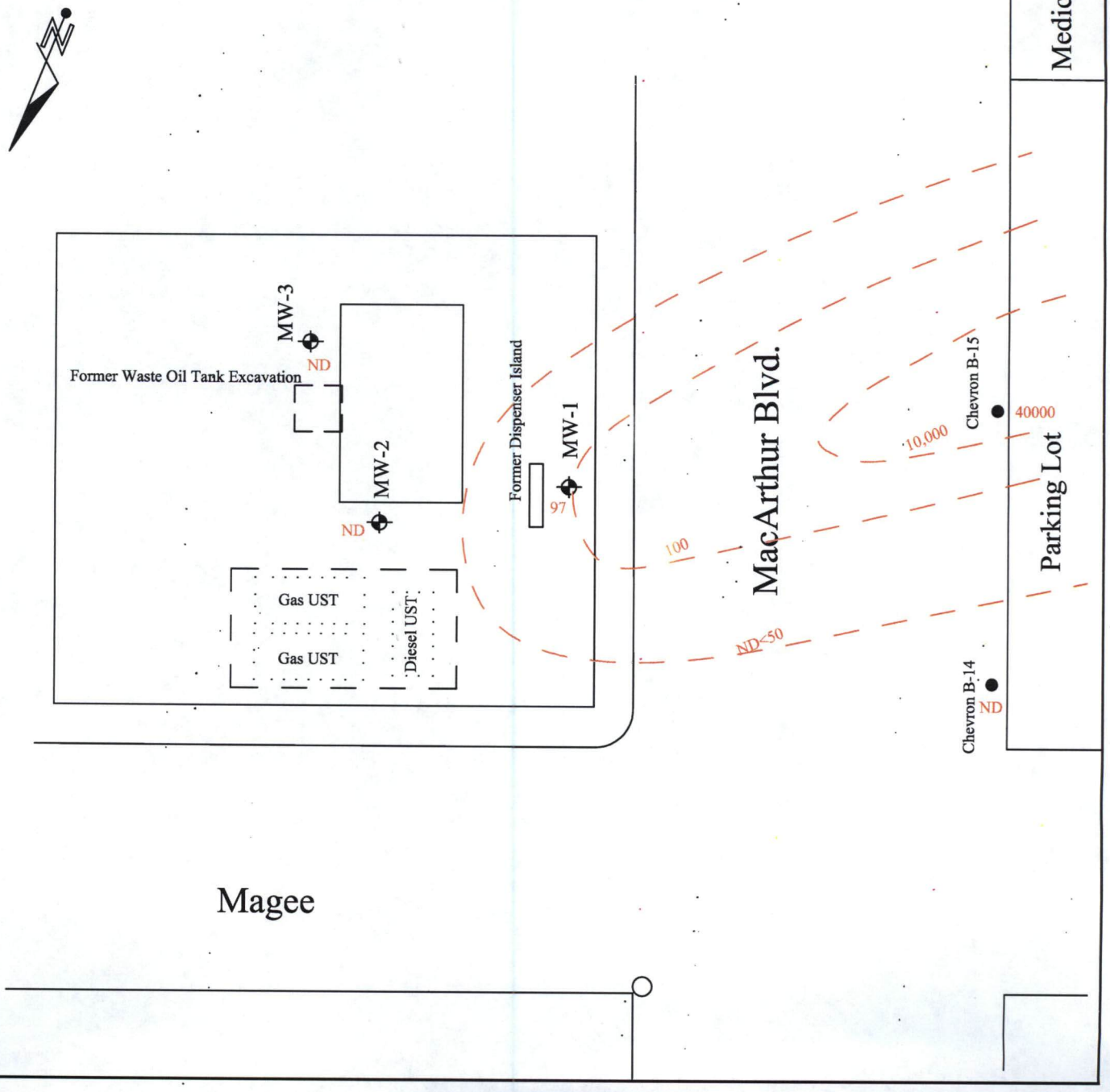
⊕ = Monitor Well

● = Soil Boring

Scale: Feet

0 20 40 80

Contour Intervals are Variable in ug/L



Enviro Soil Tech Consultants	PROJECT	Figure 6
131 Tully Road San Jose, CA 95111	3600 MacArthur Boulevard Oakland, California PROJECT # 10-14-870-GWS DATE: 10/22/2014	Isocontours of Benzene in Groundwater, 10/13/2014

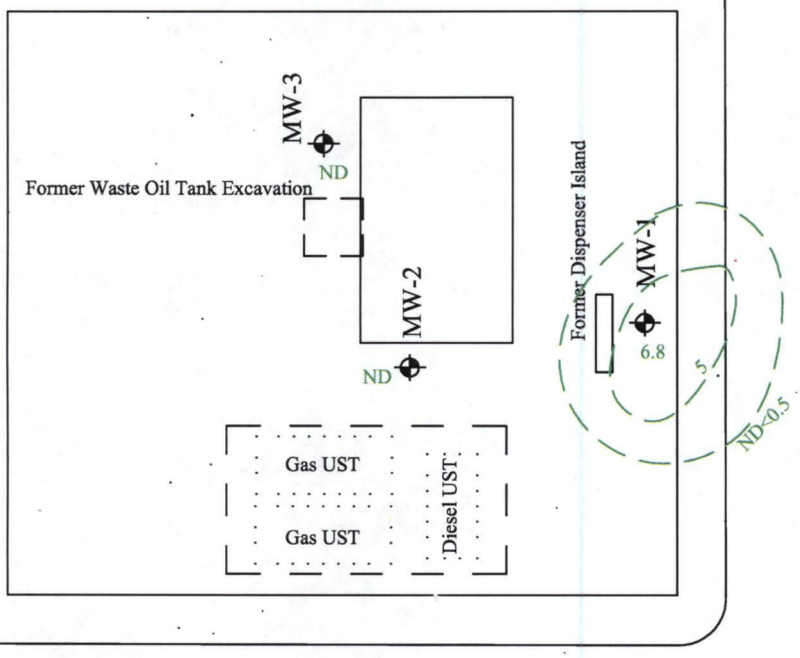
Legend

⊕ = Monitor Well

Scale: Feet

0 20 40 80

Contour Intervals are Variable in ug/L



MacArthur Blvd.

Chevron B-15

Chevron B-14

Childcare

Medical Office

Parking Lot

Magee

Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95111	PROJECT 3600 MacArthur Boulevard Oakland, California PROJECT # 10-14-870-GWS DATE: 10/22/2014	Figure 7 Isocontours of MTBE in Groundwater, 10/13/2014

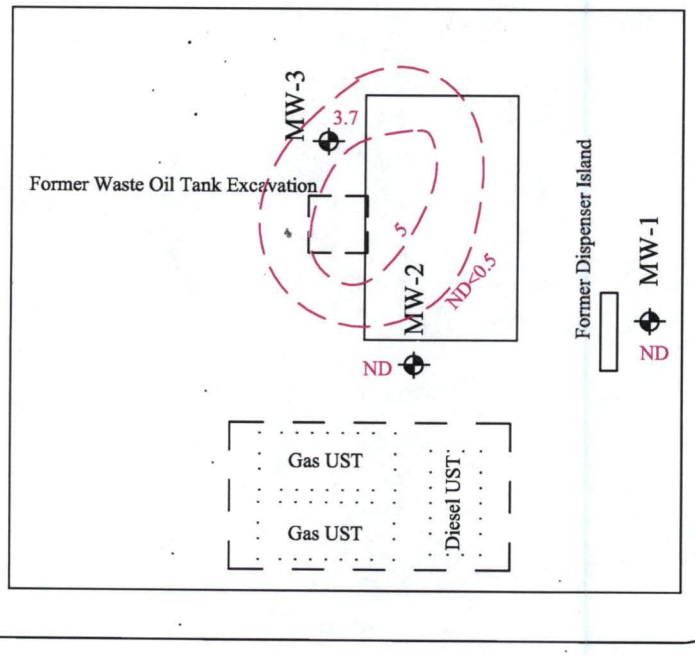
Legend

⊕ = Monitor Well

Scale: Feet

0 20 40 80

Contour Intervals are Variable in ug/L



MacArthur Blvd.

Childcare

Medical Office

Parking Lot

Magee

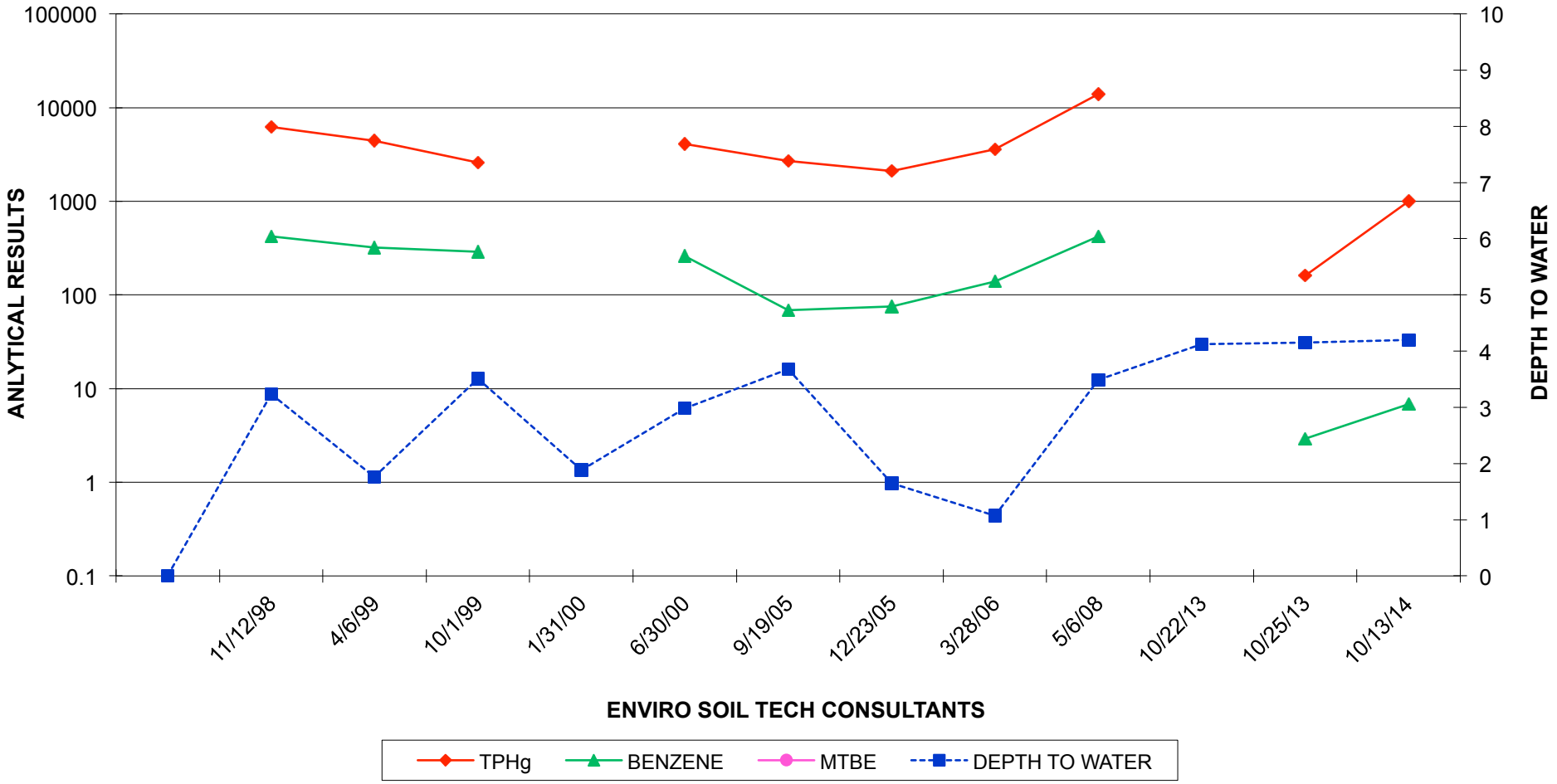
File No. 10-14-870-GWS
October 30, 2014

A P P E N D I X "C"

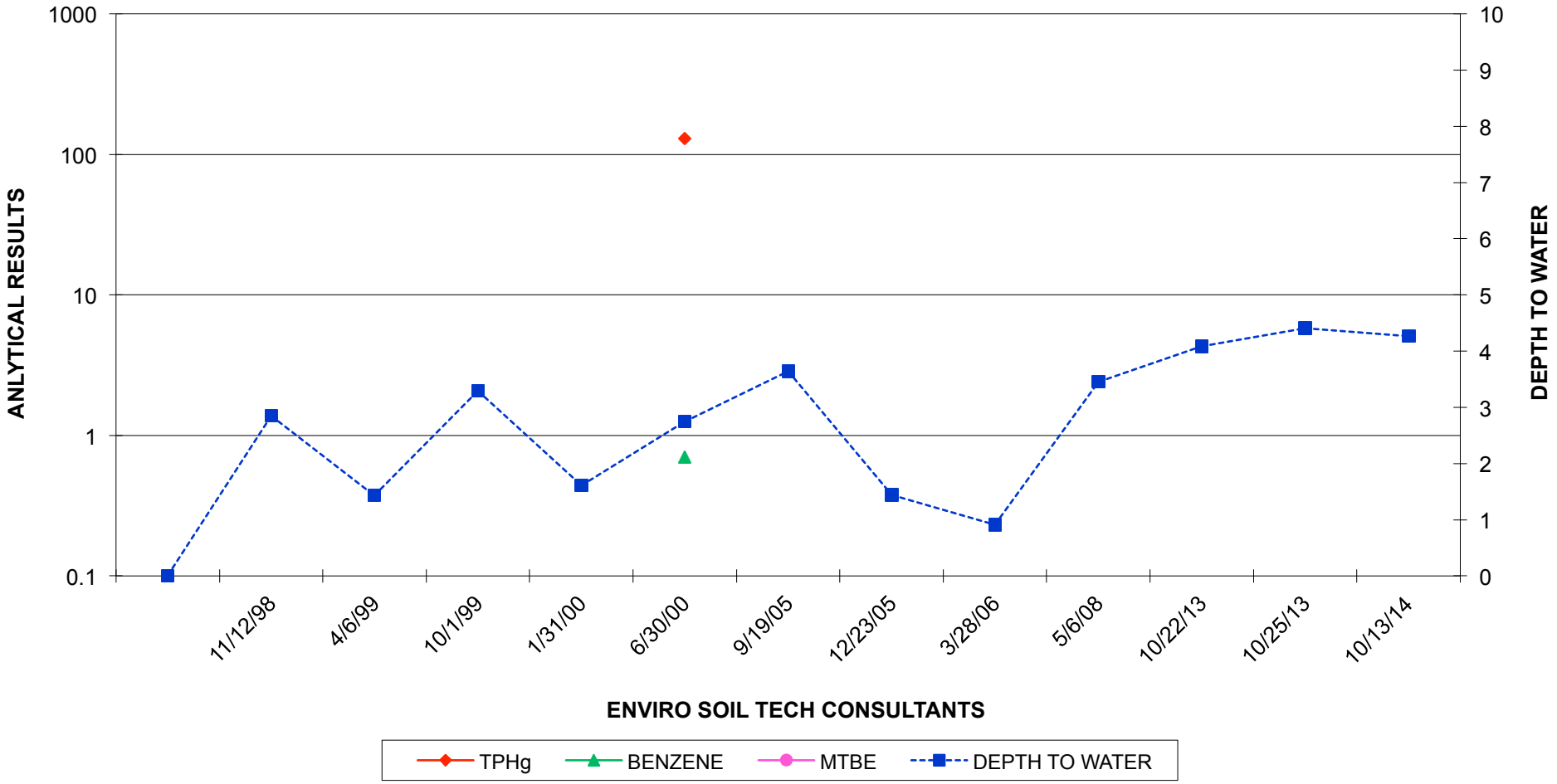
HYDROGRAPHS

ENVIRO SOIL TECH CONSULTANTS

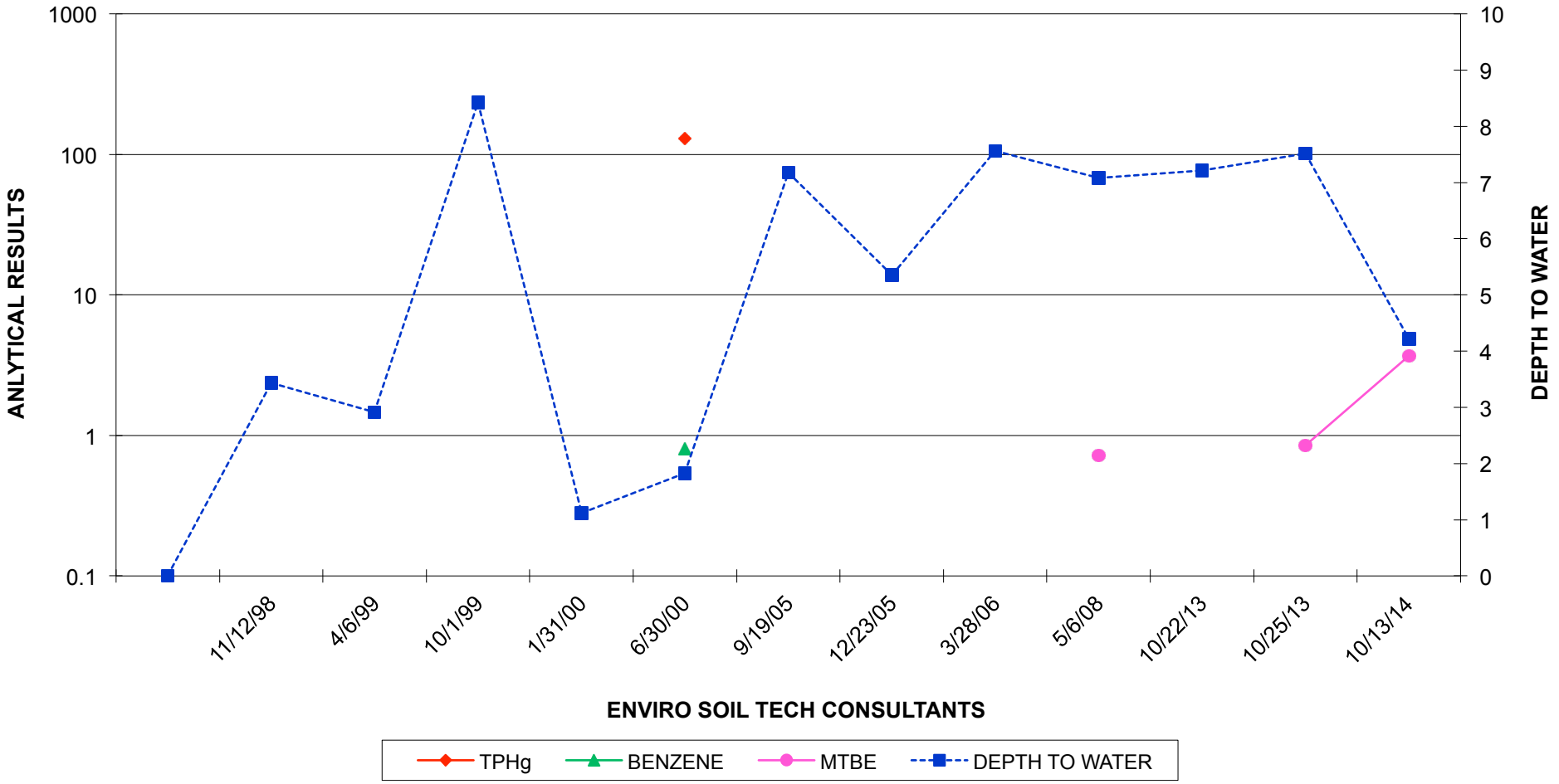
File No.: 10-14-870-GWS
TPHg, BENZENE & MTBE FOR MW-1 (µg/L)
AND DEPTH TO WATER MEASUREMENT (Feet)



File No.: 10-14-870-GWS
TPHg, BENZENE & MTBE FOR MW-2 (µg/L)
AND DEPTH TO WATER MEASUREMENT (Feet)



File No.: 10-14-870-GWS
TPHg, BENZENE & MTBE FOR MW-3 (µg/L)
AND DEPTH TO WATER MEASUREMENT (Feet)



File No. 10-14-870-GWS
October 30, 2014

A P P E N D I X "D"

STANDARD OPERATION PROCEDURE

ENVIRO SOIL TECH CONSULTANTS

File No. 10-14-870-GWS
October 30, 2014

GROUNDWATER SAMPLING

All of the sampling equipment (i.e. bailer, cables, bladder pump, discharge lines and etc.) was cleaned by pumping TSP water solution followed by distilled water prior to collection of groundwater samples

Prior to purging, the well "Water Sampling Field Survey Forms" were filled out (depth to water and total depth of water column were measured and recorded). The well was then bailed or pumped to remove four to ten well volumes or until the discharged water temperature, conductivity and pH stabilized. "Stabilized" is defined as three consecutive readings within 15% of one another.

The groundwater sample was collected when the water level in the well recovered to 80% of its static level.

Forty milliliter (ml.), glass volatile organic analysis (VOA) vials with Teflon septa and 1-liter amber glass bottles were used as sample containers. The groundwater sample was decanted into each VOA vial in such a manner that there was a meniscus at the top. The cap was quickly placed over the top of the vial and securely tightened. The VOA vials were then inverted and tapped to see if air bubbles were present. If none were present, the sample was labeled and refrigerated for delivery under chain-of-custody to the laboratory. The label information would include a sample identification number, job identification number, date, time, type of analysis requested and the sampler's name.

File No. 10-14-870-GWS
October 30, 2014

A P P E N D I X "E"

FIELD NOTES

ENVIRO SOIL TECH CONSULTANTS

ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants

131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111

Tel: (408) 297-1500 Fax: (408) 694-3447

Email: info@envirosoiltech.com

FILE NO.: 10-14-870-GWS

DATE: 10-13-14

DEPTH TO WELL: 14'

DEPTH TO WATER: 4' 2"

HEIGHT OF WATER COLUMN: _____

WELL NO.: MW-1

SAMPLER: Frank

1 WELL VOLUME: 1.59

5 WELL VOLUME: 7.95

ACTUAL PURGED VOLUME: 8

CASING DIAMETER: ✓ 2" _____ 4"

CALCULATIONS:

2" - x 0.1632 x 9.8 = 1.59 x 5 = 7.95

4" - 0.653 _____

PURGE METHOD: _____ BAILER ✓ DISPLACEMENT PUMP _____ OTHER

SAMPLE METHOD: ✓ BAILER _____ OTHER

SHEEN: ✓ NO _____ YES, DESCRIBE: _____

ODOR: ~~✓~~ NO ✓ YES, DESCRIBE: Slight Petroleum

FIELD MEASUREMENTS

TIME	VOLUME	pH	TEMP.	E.C.
	2	6.84	21.4	295.1
	4	6.89	21.7	293.8
	6	6.91	21.8	292.6
	8	6.94	21.6	291.9

ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants

131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111

Tel: (408) 297-1500 Fax: (408) 694-3447

Email: info@envirosoiltech.com

FILE NO.: 10-14-870-GWS **WELL NO.:** MW-2

DATE: 10-13-14 **SAMPLER:** Frank

DEPTH TO WELL: 14 **1 WELL VOLUME:** 1.59

DEPTH TO WATER: _____ **5 WELL VOLUME:** 7.95

HEIGHT OF WATER COLUMN: 4' 2" 7/10 **ACTUAL PURGED VOLUME:** 8

CASING DIAMETER: ✓ 2" _____ 4"

CALCULATIONS:

2" - x 0.1632 x 4.73 = 1.59 x 5 = 7.95

4" - 0.653 _____

PURGE METHOD: _____ BAILER ✓ DISPLACEMENT PUMP _____ OTHER

SAMPLE METHOD: ✓ BAILER _____ OTHER

SHEEN: ✓ NO _____ YES, DESCRIBE: _____

ODOR: ✓ NO _____ YES, DESCRIBE: _____

FIELD MEASUREMENTS

TIME	VOLUME	pH	TEMP.	E.C.
_____	2	6.89	22.1	287.3
_____	4	6.87	22.5	288.1
_____	6	6.84	22.3	287.5
_____	8	6.83	22.3	286.9
_____	_____	_____	_____	_____

ENVIRO SOIL TECH CONSULTANTS

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131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111

Tel: (408) 297-1500 Fax: (408) 694-3447

Email: info@envirosoiltech.com

FILE NO.: 10-14-870-GWS **WELL NO.:** MW-3

DATE: 10-13-14 **SAMPLER:** Frank

DEPTH TO WELL: 14' **1 WELL VOLUME:** 1.59

DEPTH TO WATER: 4' 2" 2/10 **5 WELL VOLUME:** 7.95

HEIGHT OF WATER COLUMN: _____ **ACTUAL PURGED VOLUME:** 8

CASING DIAMETER: ✓ 2" _____ 4"

CALCULATIONS:

2" - x 0.1632 x 9.78 = 1.59 x 5 = 7.95

4" - 0.653 _____

PURGE METHOD: _____ BAILER ✓ DISPLACEMENT PUMP _____ OTHER

SAMPLE METHOD: ✓ BAILER _____ OTHER

SHEEN: ✓ NO _____ YES, DESCRIBE: _____

ODOR: ✓ NO _____ YES, DESCRIBE: _____

FIELD MEASUREMENTS

TIME	VOLUME	pH	TEMP.	E.C.
	2	6.98	22.4	352.1
	4	6.95	22.6	350.6
	6	6.94	22.5	348.2
	8	6.92	22.3	345.9

File No. 10-14-870-GWS
October 30, 2014

A P P E N D I X "F"

LABORATORY REPORTS

ENVIRO SOIL TECH CONSULTANTS


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 261664
ANALYTICAL REPORT

Enviro Soil Tech Consultants	Project : 10-14-870-GWS
131 Tully Road	Location : 3600 MacArthur Blvd, Oakland
San Jose, CA 95111	Level : II

Sample ID	Lab ID
MW-1	261664-001
MW-2	261664-002
MW-3	261664-003

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 10/21/2014

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**261664**
Client:	**Enviro Soil Tech Consultants**
Project:	**10-14-870-GWS**
Location:	**3600 MacArthur Blvd, Oakland**
Request Date:	**10/13/14**
Samples Received:	**10/13/14**

This data package contains sample and QC results for three water samples, requested for the above referenced project on 10/13/14. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):
No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

CHAIN OF CUSTODY RECORD

2416604

PROJ. NO.	NAME
10-14-870-GWS	3600 MacArthur Blvd. Oakland

SAMPLERS: (*Siganature*)

NO.	DATE	TIME	SOIL	WATER	AIR	LOCATION	CON-TAINER	ANALYSES REQUESTED: TPHd & TPHmo/ with silica gel cleanup by 8015M(D	ANALYSES REQUESTED: TPHg (8015 Mod)	ANALYSES REQUESTED: VOCs (8260B*)	ANALYSES REQUESTED:	ANALYSES REQUESTED:	ANALYSES REQUESTED:	REMARKS
1	10/13/14			✓		MW-1	8	✓	✓	✓				EDF#T0600102113
2	"			✓		MW-2	8	✓	✓	✓				
3	"			✓		MW-3	8	✓	✓	✓				
														* Full list

Relinquished by: (*Signature*)	Date/Time	Received by: (*Signature*)	Date/Time	Relinquished by: (*Signature*)	Date/Time	Received by: (*Signature*)
	10/13/14 8:55		10/13/14 17:57			
Relinquished by: (*Signature*)	Dated/Time	Received by: (*Signature*)	Date/Time	Relinquished by: (*Signature*)	Date/Time	Received by: (*Signature*)
Relinquished by: (*Signature*)	Date/Time	Received for Laboratory by: (*Signature*)	Date/Time	**Remarks:** Please send lab report to Frank Hamedi.		

ENVIRO SOIL TECH CONSULTANTS
Environmental & Geotechnical Consultants
131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111
Tel: (408) 297-1500 Fax: (408) 292-2116

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 240604 Date Received 10/3 Number of coolers 1
Client EST Project 10-14-870-GWS

Date Opened 10/3 By (print) [illegible] (sign) [illegible]
Date Logged in _____ By (print) _____ (sign) _____

1. Did cooler come with a shipping slip (airbill, etc) _____ YES ~~NO~~
   Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☐ ~~NO~~
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO ~~N/A~~
3. Were custody papers dry and intact when received? _____ ~~YES~~ NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO
5. Is the project identifiable from custody papers? (If so fill out top of form) ___ YES NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☑ Foam blocks ☐ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☑ Wet ☐ Blue/Gel ☐ None Temp(°C) _____

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☑ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES ~~NO~~
   If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ ~~YES~~ NO
10. Are there any missing / extra samples? _____ YES ~~NO~~
11. Are samples in the appropriate containers for indicated tests? _____ ~~YES~~ NO
12. Are sample labels present, in good condition and complete? _____ ~~YES~~ NO
13. Do the sample labels agree with custody papers? _____ ~~YES~~ NO
14. Was sufficient amount of sample sent for tests requested? _____ ~~YES~~ NO
15. Are the samples appropriately preserved? _____ ~~YES~~ NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO ~~N/A~~
17. Did you document your preservative check? _____ YES NO ~~N/A~~
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO ~~N/A~~
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO ~~N/A~~
20. Are bubbles > 6mm absent in VOA samples? _____ YES ~~NO~~ N/A
21. Was the client contacted concerning this sample delivery? _____ YES ~~NO~~
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS
20) 2/6 VOAs for -003 rcvd w/ bubbles >6mm

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 261664

Results for any subcontracted analyses are not included in this summary.

Client : Enviro Soil Tech Consultants
Project : 10-14-870-GWS
Location : 3600 MacArthur Blvd, Oakland

Client Sample ID : MW-1 Laboratory Sample ID : 261664-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	1,000	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	97	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Benzene	6.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	1.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	3.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
sec-Butylbenzene	0.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
n-Butylbenzene	1.1		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : MW-2 Laboratory Sample ID : 261664-002

No Detections

Client Sample ID : MW-3 Laboratory Sample ID : 261664-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
MTBE	3.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Y = Sample exhibits chromatographic pattern which does not resemble standard

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	216444
Units:	ug/L	Sampled:	10/13/14
Diln Fac:	1.000	Received:	10/13/14

Field ID: MW-1 Lab ID: 261664-001
Type: SAMPLE Analyzed: 10/15/14

Analyte	Result	RL
Gasoline C7-C12	1,000 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	121	77-128

Field ID: MW-2 Lab ID: 261664-002
Type: SAMPLE Analyzed: 10/16/14

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	77-128

Field ID: MW-3 Lab ID: 261664-003
Type: SAMPLE Analyzed: 10/16/14

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	77-128

Type: BLANK Analyzed: 10/15/14
Lab ID: QC761739

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	77-128

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC761738	Batch#:	216444
Matrix:	Water	Analyzed:	10/15/14
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,124	112	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	111	77-128

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	216444
MSS Lab ID:	261710-001	Sampled:	10/13/14
Matrix:	Water	Received:	10/14/14
Units:	ug/L	Analyzed:	10/15/14
Diln Fac:	1.000		

Type: MS Lab ID: QC761740

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,016	2,000	2,829	91	74-120

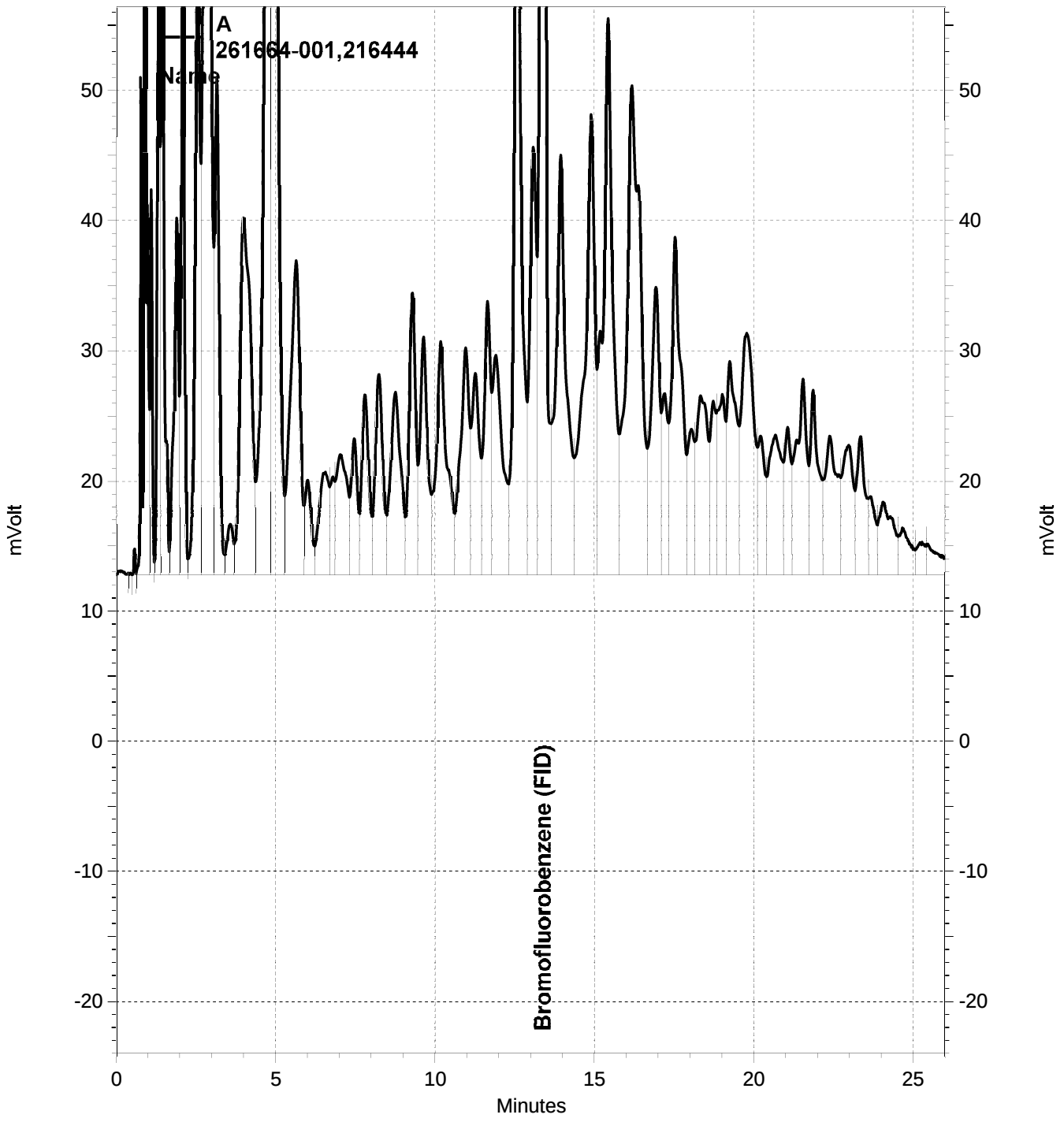
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	77-128

Type: MSD Lab ID: QC761741

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,703	84	74-120	5	27

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	77-128

RPD= Relative Percent Difference



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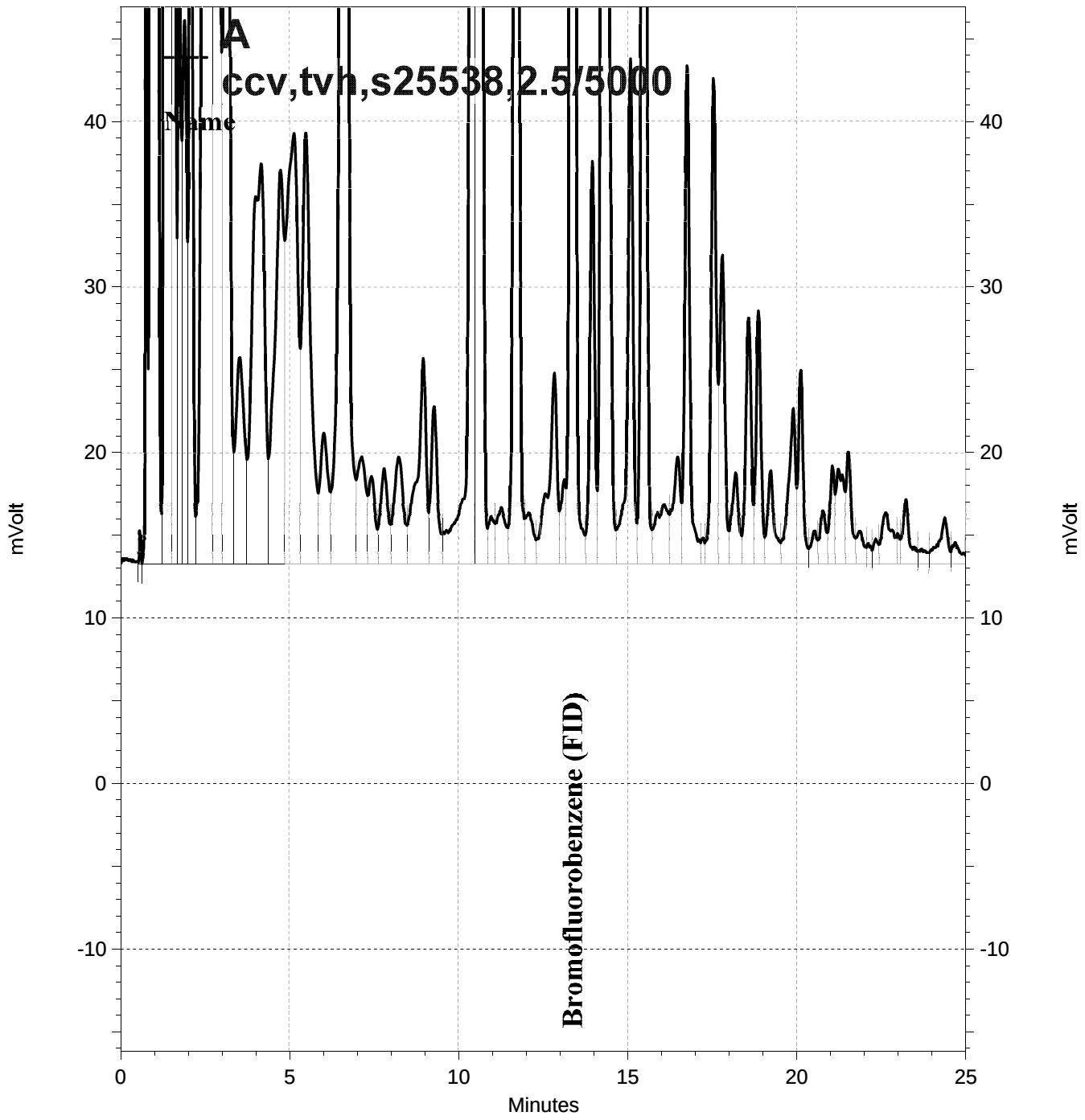

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Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 3520C
Project#:	10-14-870-GWS	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	10/13/14
Units:	ug/L	Received:	10/13/14
Diln Fac:	1.000	Prepared:	10/15/14
Batch#:	216474	Analyzed:	10/16/14

Field ID: MW-1 Lab ID: 261664-001
Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	97 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	95	66-129

Field ID: MW-2 Lab ID: 261664-002
Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	80	66-129

Field ID: MW-3 Lab ID: 261664-003
Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	84	66-129

Type: BLANK Cleanup Method: EPA 3630C
Lab ID: QC761873

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	100	66-129

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 3520C
Project#:	10-14-870-GWS	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	216474
Units:	ug/L	Prepared:	10/15/14
Diln Fac:	1.000	Analyzed:	10/16/14

Type: BS Cleanup Method: EPA 3630C
Lab ID: QC761874

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,048	82	61-120

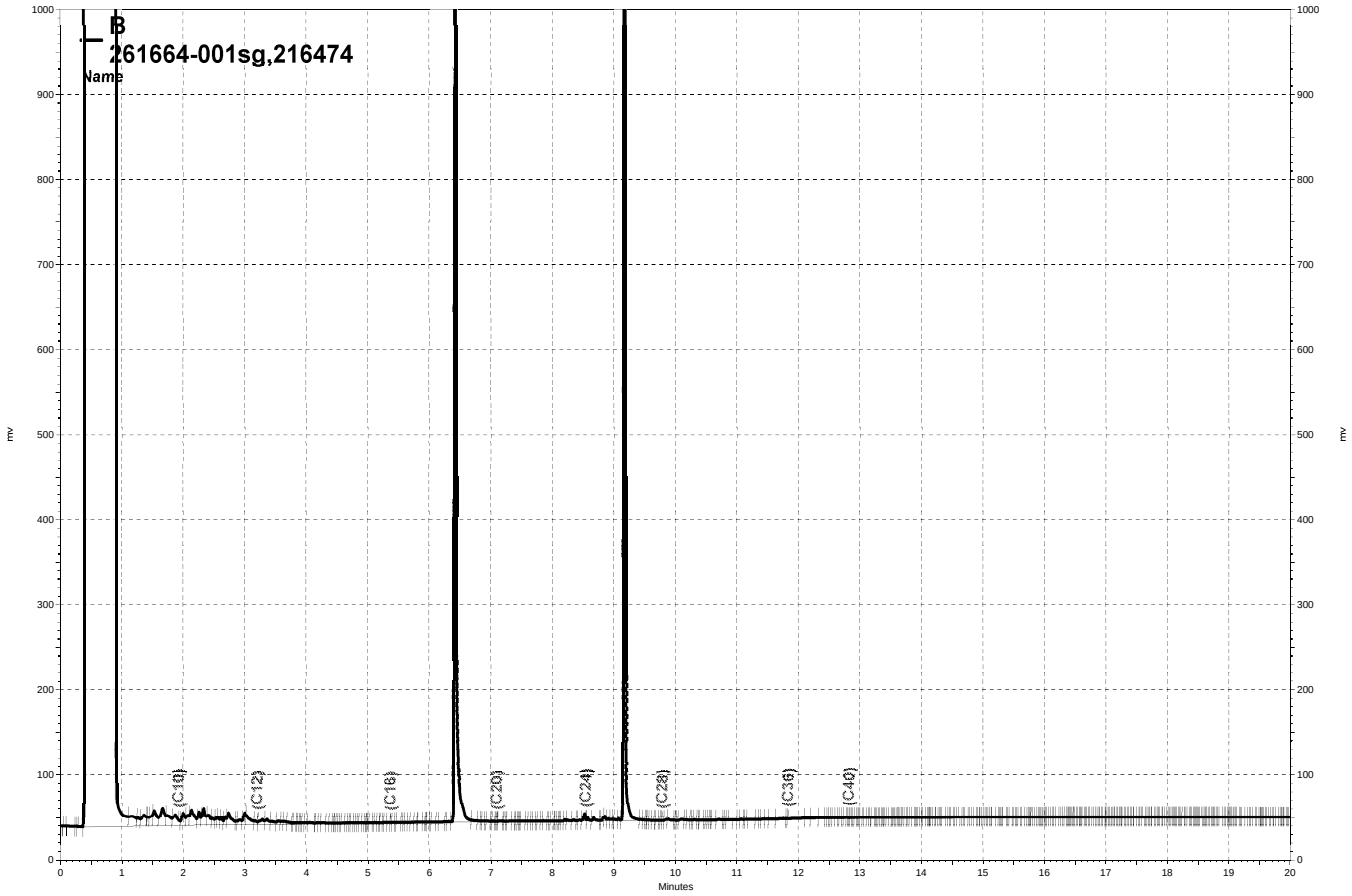
Surrogate	%REC	Limits
o-Terphenyl	91	66-129

Type: BSD Cleanup Method: EPA 3630C
Lab ID: QC761875

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,967	79	61-120	4	45

Surrogate	%REC	Limits
o-Terphenyl	87	66-129

RPD= Relative Percent Difference



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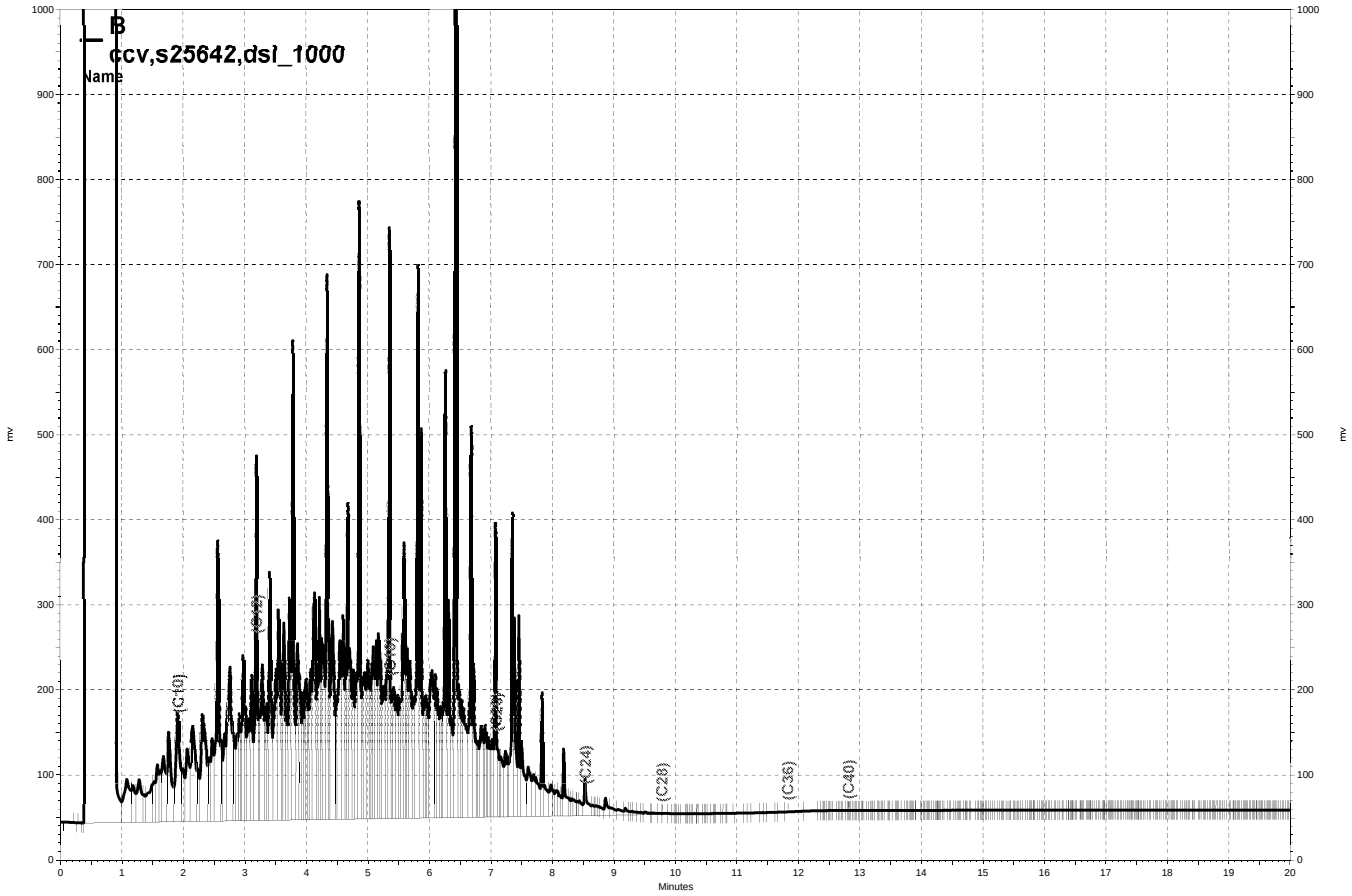

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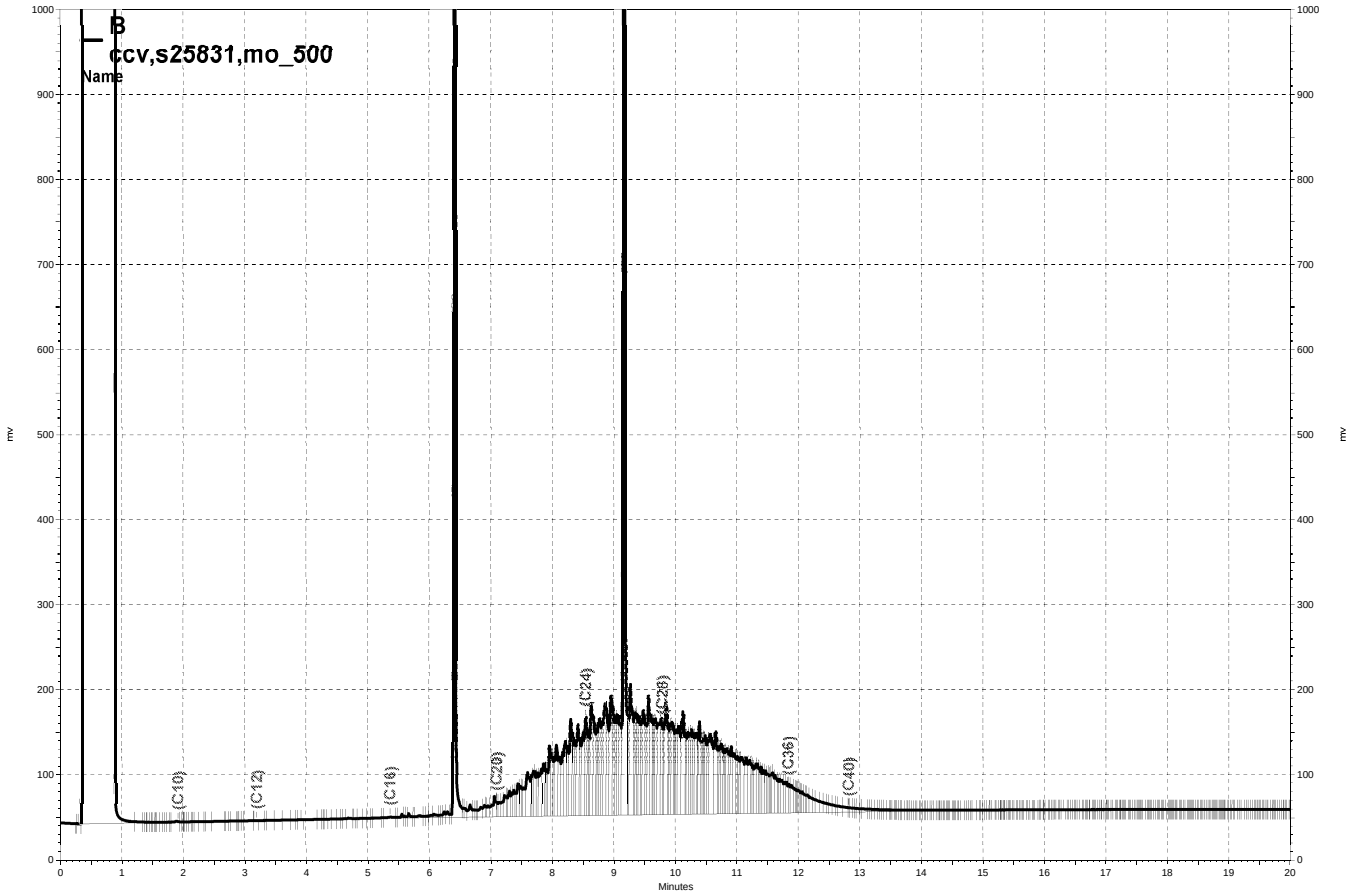

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	216550
Lab ID:	261664-001	Sampled:	10/13/14
Matrix:	Water	Received:	10/13/14
Units:	ug/L	Analyzed:	10/17/14
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	6.8	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	216550
Lab ID:	261664-001	Sampled:	10/13/14
Matrix:	Water	Received:	10/13/14
Units:	ug/L	Analyzed:	10/17/14
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	1.9	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	3.6	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	0.7	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	1.1	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5
tert-Butyl Alcohol (TBA)	ND	10

Surrogate	%REC	Limits
Dibromofluoromethane	99	77-136
1,2-Dichloroethane-d4	90	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	216550
Lab ID:	261664-002	Sampled:	10/13/14
Matrix:	Water	Received:	10/13/14
Units:	ug/L	Analyzed:	10/17/14
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	216550
Lab ID:	261664-002	Sampled:	10/13/14
Matrix:	Water	Received:	10/13/14
Units:	ug/L	Analyzed:	10/17/14
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5
tert-Butyl Alcohol (TBA)	ND	10

Surrogate	%REC	Limits
Dibromofluoromethane	102	77-136
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	216550
Lab ID:	261664-003	Sampled:	10/13/14
Matrix:	Water	Received:	10/13/14
Units:	ug/L	Analyzed:	10/18/14
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	3.7	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	216550
Lab ID:	261664-003	Sampled:	10/13/14
Matrix:	Water	Received:	10/13/14
Units:	ug/L	Analyzed:	10/18/14
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5
tert-Butyl Alcohol (TBA)	ND	10

Surrogate	%REC	Limits
Dibromofluoromethane	101	77-136
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	216550
Units:	ug/L	Analyzed:	10/17/14
Diln Fac:	1.000		

Type: BS Lab ID: QC762167

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	18.99	95	65-134
Benzene	20.00	20.19	101	80-124
Trichloroethene	20.00	19.39	97	80-120
Toluene	20.00	20.23	101	80-122
Chlorobenzene	20.00	20.11	101	80-120
tert-Butyl Alcohol (TBA)	100.0	107.3	107	37-151

Surrogate	%REC	Limits
Dibromofluoromethane	101	77-136
1,2-Dichloroethane-d4	91	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	99	80-120

Type: BSD Lab ID: QC762168

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	22.83	114	65-134	18	20
Benzene	20.00	22.19	111	80-124	9	20
Trichloroethene	20.00	22.09	110	80-120	13	20
Toluene	20.00	23.03	115	80-122	13	20
Chlorobenzene	20.00	22.23	111	80-120	10	20
tert-Butyl Alcohol (TBA)	100.0	106.9	107	37-151	0	30

Surrogate	%REC	Limits
Dibromofluoromethane	100	77-136
1,2-Dichloroethane-d4	88	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC762169	Batch#:	216550
Matrix:	Water	Analyzed:	10/17/14
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC762169	Batch#:	216550
Matrix:	Water	Analyzed:	10/17/14
Units:	ug/L		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5
tert-Butyl Alcohol (TBA)	ND	10

Surrogate	%REC	Limits
Dibromofluoromethane	101	77-136
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	261664	Location:	3600 MacArthur Blvd, Oakland
Client:	Enviro Soil Tech Consultants	Prep:	EPA 5030B
Project#:	10-14-870-GWS	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	216550
MSS Lab ID:	261761-001	Sampled:	10/13/14
Matrix:	Water	Received:	10/16/14
Units:	ug/L	Analyzed:	10/20/14
Diln Fac:	1.000		

Type: MS Lab ID: QC762197

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1000	12.50	13.47	108	69-129
Benzene	<0.1000	12.50	15.00	120	80-127
Trichloroethene	<0.1161	12.50	14.34	115	70-127
Toluene	<0.1000	12.50	14.97	120	80-123
Chlorobenzene	<0.1000	12.50	14.60	117	80-120
tert-Butyl Alcohol (TBA)	<1.343	62.50	66.28	106	38-150

Surrogate	%REC	Limits
Dibromofluoromethane	102	77-136
1,2-Dichloroethane-d4	91	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-120

Type: MSD Lab ID: QC762198

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	11.73	94	69-129	14	26
Benzene	12.50	13.07	105	80-127	14	23
Trichloroethene	12.50	12.33	99	70-127	15	21
Toluene	12.50	13.32	107	80-123	12	22
Chlorobenzene	12.50	13.19	106	80-120	10	22
tert-Butyl Alcohol (TBA)	62.50	63.80	102	38-150	4	38

Surrogate	%REC	Limits
Dibromofluoromethane	102	77-136
1,2-Dichloroethane-d4	90	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference