

Re:

Brittany Frost Project Manager Marketing Business Unit

RECEIVED

Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 842-6103 bfrost@chevron.com

By Alameda County Environmental Health 11:19 am, Aug 01, 201

Ms. Karel Detterman Alameda County Environmental Health (ACEH) 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Former Tidewater Service Station 373378

7600 MacArthur Boulevard Oakland, California

I have reviewed the attached Second Quarter 2017 Groundwater Monitoring and Sampling Report.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by GHD Services, Inc., upon who assistance and advice I have relied.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Brittany Frost Project Manager

Attachment: Second Quarter 2017 Groundwater Monitoring and Sampling Report



July 27, 2017 Reference No. 062164

Ms. Karel Detterman Alameda County Department of Environmental Health 1131 Harbor Bay Parkway Oakland, California 94502

Re: Second Quarter 2017 Monitoring and Sampling Report Former Tidewater Service Station
Phillip 66 Site 5677/Chevron Site 373378
7600 MacArthur Boulevard
Oakland, California
ACEH Fuel Leak Case No. RO3087

Dear Ms. Detterman:

GHD is submitting this Second Quarter 2017 Monitoring and Sampling Report for the site referenced above on behalf of Chevron Environmental Management Company (Chevron) and Phillips 66 Company (Phillips 66). This report was prepared in accordance with the Alameda County Department of Environmental Health's (ACDEH) Technical Report Request Letter dated July 19, 2016 (Attachment A). GHD completed four quarters of groundwater monitoring as requested in the ACDEH letter with the second quarter 2017 event being the last event. Site background information, current quarter monitoring results, and anticipated future activities are discussed below.

1. Site Background

Site Description

The site is located at 7600 MacArthur Boulevard in Oakland, California (Figure 1), and is currently occupied by a tenant, who uses the property to store and repair automobiles. As such, any potential impacts associated with the current site activities are the responsibility of the current owner. Based on information provided by ACDEH, Phillips Petroleum Company owned the property from 1966 through 1973. Since then, the site has had several owners, but has not undergone any major redevelopment. Former site features included at least one 1,000-gallon underground storage tank (UST), one 300-gallon UST, a dispenser island, and a station building with two hydraulic lifts. Approximate locations of the former service station building and USTs are shown on Figure 2. The site is bordered by private residences to the northeast and southeast. Commercial businesses are located southwest beyond MacArthur Boulevard and a vacant lot is located northwest across 76th Avenue.



Site Geology and Hydrogeology

The site is relatively flat lying, slightly sloping to the west southwest toward San Francisco Bay at an approximate elevation of 92 feet above mean sea level. Based on the San Francisco San Jose Quadrangle geologic map from the California Department of Conservation, the site is underlain by sand and quaternary alluvium, which is further underlain by marine sandstone, greenstone, shale, conglomerate, and chert of the Mesozoic Franciscan Complex.

Soil encountered beneath the site during investigation consists primarily of clay with varying percentages of sand and gravel. Groundwater was encountered at approximately 33 to 34 feet below grade (fbg). The regional groundwater flow in the vicinity of the site is assumed to be towards the west-southwest, in the direction of the San Francisco Bay, and generally following the natural topographic relief of the area (Figure 1).

The site is located in the East Bay Plain groundwater basin according to the San Francisco Bay Regional Water Quality Control Board's Basin Plan. Groundwater in this basin is designated beneficial for municipal and domestic water supply and industrial process, service water, and agricultural water supply. The nearest surface water body is Arroyo Viejo Creek, which flows generally southwest to the Oakland Inner Harbor and is located approximately 0.4-mile southwest of the site.

Previous Environmental Work

In January 2007, one 1,000-gallon UST located onsite and one 300-gallon UST located beneath the sidewalk adjacent to MacArthur Boulevard were removed. Both tanks had been previously abandoned and filled with concrete during the 1970s. During removal of the USTs, soil samples P1, P2, and ST1 were collected beneath the former USTs. In September 2007, Golden Gate Tank Removal oversaw the advancement of soil borings B-1 through B-4 to depths ranging from 9 to 13 fbg.

Total petroleum hydrocarbons as gasoline (TPHg) was detected in soil only from boring B-4 at concentrations up to 500 milligrams per kilogram (mg/kg) beneath the former 300-gallon UST, but the chromatogram pattern was atypical for TPHg. TPH as diesel (TPHd) was detected in soil samples from P2, B-3, and B-4, but the chromatogram pattern did not resemble TPHd. TPH as motor oil (TPHmo) was detected in B-3 at concentrations up to 4,500 mg/kg, and total oil and grease (TOG) was detected in samples P1, P2, and ST1 collected beneath the USTs at concentrations between 55 to 300 mg/kg. No other hydrocarbon constituents were detected.

Between September 30, 2014 and October 8, 2014, GHD (formerly CRA) installed monitoring wells MW-1 through MW-3 and advanced soil borings BH-1 through BH-7 across the site to evaluate petroleum

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hydrocarbons in soil and groundwater, and advanced seven hand augered soil borings to evaluate conductive anomalies identified during a geophysical survey conducted in April 2014.

No TPHd, TPHg, VOCs, PAHs, fuel oxygenates, lead scavengers, or metals were detected in soil exceeding State Water Resources Control Board Low-Threat Closure Policy (SWRCB LTCP) levels or San Francisco Bay Regional Water Quality Control Board Environmental Screening levels (RWQCB ESLs) with the exception of the following:

- Benzo(a)pyrene in MW-3 at 5 fbg at a concentration of 0.039 mg/kg slightly exceeding the RWQCB ESL of 0.038 mg/kg, but was below the SWRCB LTCP of 0.063 mg/kg.
- Vanadium detected in BH-5 at 20 fbg at a concentration of 782 mg/kg, which is twice the screening level of 390 mg/kg. Concentrations of vanadium in soil above and below 20 fbg in BH-5 were below the screening level.

No TPHd, TPHg, VOCs, PAHs, fuel oxygenates, lead scavengers, or metals were detected in groundwater exceeding RWQCB ESLs with the exception of the following:

- TPHd in borings BH-4 and MW-1 at 620 and 290 μg/L, respectively.
- TPHg in boring MW-1 at 480 μg/L.
- Carbon Tetrachloride in boring BH-1 at 1 μg/L.

Advancement of seven hand auger borings where magnetic anomalies were noted confirmed no additional USTs are present at the property.

2. Results of Second Quarter 2017 Monitoring Event

On May 15, 2017, G-R monitored and sampled site wells MW-1 through MW-3. Well development and sampling were completed pursuant to the ACDEH directive letter dated July 19, 2016.

During the second quarter 2017 event, depth to groundwater in site wells was approximately 15 feet below the top of the well casings. The groundwater flow direction was southwest at a gradient of 0.05 (Figure 2). Current and historical groundwater flow direction and gradient data are presented in Table 1. G-R's *Well Development, and Groundwater Monitoring and Sampling Data Packages* are included as Attachment B. Current and historic groundwater monitoring and sampling data are presented in Tables 1 through 3. Eurofins Lancaster Laboratory Environmental, LLCs' *Analytical Results* report is included as Attachment C.

Groundwater samples were analyzed for the site's constituents of concern (COCs). TPHd, TPHg, benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) results are summarized below in Table A.

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Table A: Groundwater Analytical Data Summary

Well ID	TPHd μg/L	TPHg μg/L	Benzene μg/L	Toluene μg/L	Ethylbenzene μg/L	Total Xylenes μg/L	MTBE μg/L
ESLs	100	100	1	40	13	20	5
MW-1	<110	<100	<1	<1	<1	<1	<1
MW-2	79 J	<100	<1	<1	<1	<1	<1
MW-3	62 J	<100	<1	<1	<1	<1	<1

μg/L Micrograms per liter

< Indicates constituent was not detected at or above laboratory reporting limit

NA Not analyzed
J Estimated value

Data in **bold** represent concentrations that exceed applicable ESL (Environmental Screening Levels).

Results of the groundwater sampling this quarter indicate the following:

No COC was detected above ESLs in any of the wells sampled.

TPHd, TPHg, and BTEX analytical data are presented on Figure 2. Groundwater concentration and elevation graphs are presented in Attachment D.

Current groundwater analytical results indicate minimal petroleum impact, consistent with historical data.

3. Investigation Derived Waste

Purge water generated during well development and sampling activities was stored in a DOT-approved tote and then transported by G-R to their facility in Dublin, CA for temporary storage. The purge water will be transported to a Chevron-approved facility for disposal. Documentation of disposal activities for the first quarter sampling event are provided in Attachment E. Documentation for second quarter 2017 disposal activities will be provided separately once the waste has been removed for disposal.

4. Anticipated Future Activities

The following activities are anticipated at the site during third quarter 2017:

ACDEH has requested quarterly monitoring for four continuous quarters to determine groundwater conditions at the site, which GHD has completed. The second quarter 2017 sampling event is the last of four continuous quarters of sampling. The monitoring results indicate compliance with the low-threat closure policy. GHD is preparing a request for closure that will be submitted under separate cover.

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We appreciate the opportunity to work with you on this project. Should you have any questions on the above, please do not hesitate to contact Matthew Davis at (253) 302-8281.

Greg Barclay PG 6260

Sincerely,

GHD

Matthew Davis

MD/cw/8 Encl.

Figure 1 Vicinity Map

Figure 2 Groundwater Elevation Contour and Hydrocarbon Map

Table 1 Cumulative Groundwater Elevation and Analytical Data

Table 2 Historical PAH Data
Table 3 Historical Metals Data

Attachment A Agency Correspondence

Attachment B G-R Well Development and Monitoring Data Sheets

Attachment C Lancaster Analytical Reports

Attachment D Groundwater Elevation and Concentration Graphs

Attachment E Purge Water Disposal Documentation

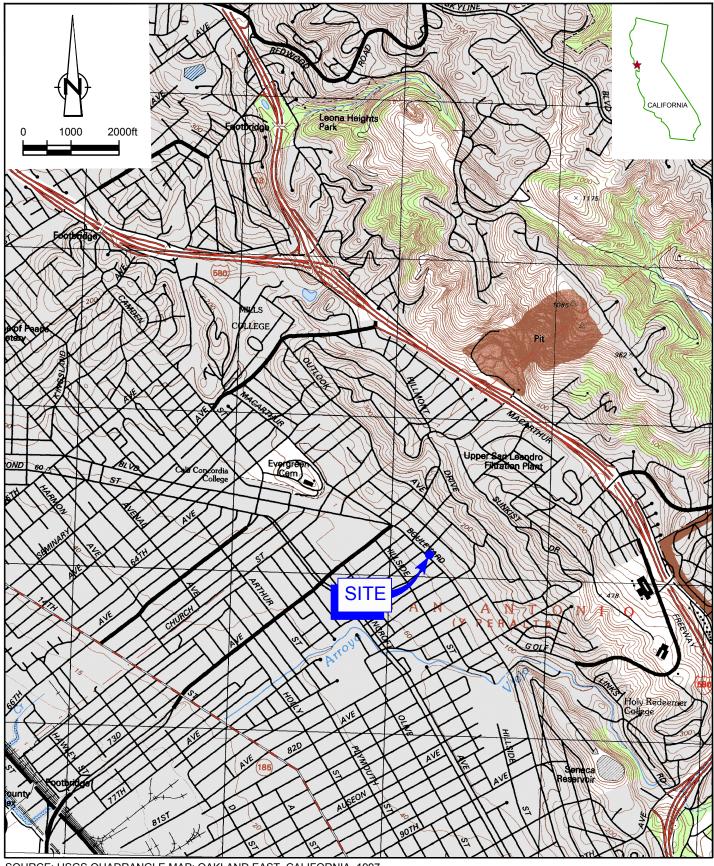
cc: Ms. Brittany Frost, Chevron (electronic copy)

Mr. Ed Ralston, Phillips 66 (electronic copy)

Ms. Hong Gardner, Hong Gardner Trust (electronic copy)

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Figures



SOURCE: USGS QUADRANGLE MAP; OAKLAND EAST, CALIFORNIA, 1997.

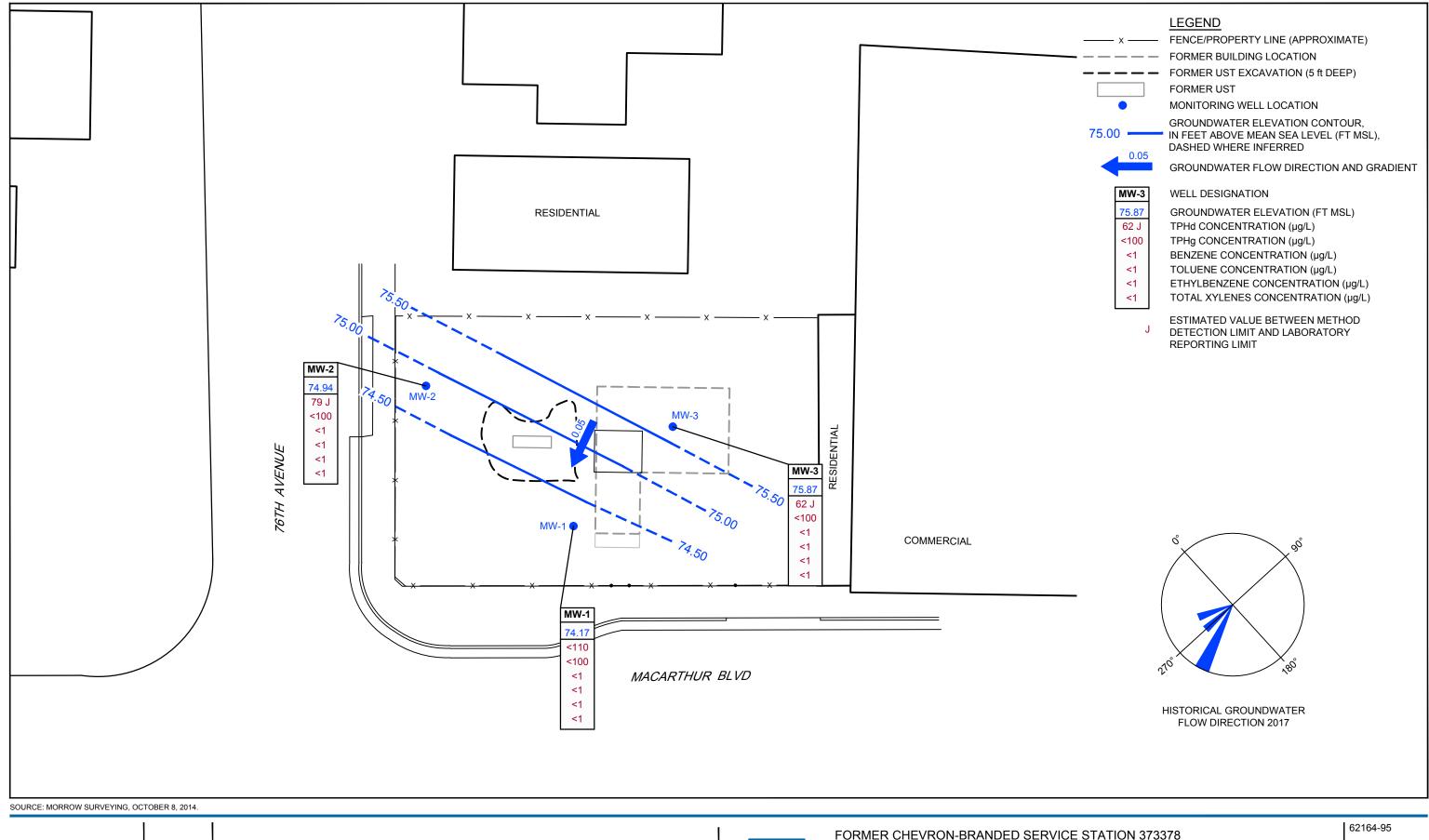


FORMER CHEVRON-BRANDED SERVICE STATION 373378 7600 MACARTHUR BLVD OAKLAND, CALIFORNIA

62164-95 Jul 4, 2017

VICINITY MAP

FIGURE 1



GHD

FORMER CHEVRON-BRANDED SERVICE STATION 373378 7600 MACARTHUR BLVD OAKLAND, CALIFORNIA

Jul 20, 2017

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP - MAY 15, 2017

Tables

Table 1

Cumulative Groundwater Elevation and Analytical Data Former Tidewater Service Station Phillips 66 Site 5677 Chevron Site 373378 7600 MacArthur Blvd. Oakland, California

Sample ID	Date Sampled	Well Elevation (ft-amsl)	Depth to Water	Groundwater Elevation (ft-amsl)	Depth to LPH (ft)	Product Thickness (feet)	TPH (µg/L)	DRO (μg/L)	GRO (μg/L)	Benzene (µg/L)	Toluene (μg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (μg/L)
MW-1	7/28/2016 ¹	89.45	22.62	66.83														
MW-1	8/5/2016	89.45	22.84	66.61			<5,000	260	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-1	12/15/2016	89.45	19.71	69.74			<5,000	<100	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-1	2/16/2017	89.45	11.38	78.07			<5,000	<110	70 J	<1	<1	0.5 J	<1	<1	<1	<1	<1	<20
MW-1	5/15/2017	89.45	15.28	74.17			<5,000	<110	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-2	7/28/2016 ¹	90.35	23.06	67.29														
MW-2	8/5/2016	90.35	24.15	66.20			<5,000	<100	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-2	12/15/2016	90.35	20.57	69.78			<5,000	<100	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-2	2/16/2017	90.35	10.93	79.42			<5,000	57 J	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-2	5/15/2017	90.35	15.41	74.94			<5,000	79 J	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-3	7/28/2016 ¹	90.45	22.40	68.05					-					-				
MW-3	8/5/2016	90.45	22.91	67.54			1,500 J	<100	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-3	12/15/2016	90.45	20.11	70.34			<5,000	<100	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-3	2/16/2017	90.45	10.85	79.60			<5,000	<110	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
MW-3	5/15/2017	90.45	14.58	75.87			<5,000	62 J	<100	<1	<1	<1	<1	<1	<1	<1	<1	<20
QA-T	8/5/2016								<100	<1	<1	<1	<1	<1			_	
QA-T	12/15/2016			<u></u>					<100	<1	<1	<1		<1	<1	<1	<1	<20
QA-T	2/16/2017		 						<100	<1	<1	<1	<1	<1				
QA-T	5/15/2017								<100	<1	<1	<1	<1	<1				_
QA-1	3/13/2017								<100	<1	ζ1	\ 1	\ 1	<u> </u>				

Table 1

Cumulative Groundwater Elevation and Analytical Data Former Tidewater Service Station Phillips 66 Site 5677 Chevron Site 373378 7600 MacArthur Blvd.

Oakland, California

	Well		Groundwater	Depth to	Product							Total					
	Elevation	Depth to Water	Elevation	LPH	Thickness	TPH	DRO	GRO	Benzene	Toluene	Ethylbenzene	Xylenes	MtBE	DIPE	ETBE	TAME	TBA
Sample ID Date Sampled	(ft-amsl)	(ft)	(ft-amsl)	(ft)	(feet)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)

Abbreviations and Notes

amsl = above mean sea level

bgs = below ground surface

DIPE = Diisopropyl alcohol

ETBE = Ethyl tert-butyl ether

ID = Identification

LPH = Liquid phase hydrocarbons

MtBE = Methyl tertiary butyl ether

MRL = Method reporting limit

QA-T = Trip blank

RPD = Relative percent difference

TAME = Tert amylmethyl ether

TBA = Tert-butanol

TPH-DRO = Total Petroleum Hydrocarbons as Diesel Range Organics

TPH-GRO = Total Petroleum Hydrocarbons as Gasoline Range Organics

TPH-MRO = Total Petroleum Hydrocarbons as Motor Oil Range Organics

μg/L = micrograms per liter

< = Less than MRL

'-- = Not applicable

j = Laboratory estimated value1 = Well development performed

Table 2

SVOCs and PAH Data Former Tidewater Service Station Phillips 66 Site 5677 Chevron Site 373378 7600 MacArthur Blvd. Oakland, California

	Ī	٨٨٨	tional SV	OC's PAH's																
		Add	lional Sv	l			1		1			РАПЗ					1		1	
Sample ID	Date Sampled	元 1,2-Dichlorobenzene (o- 点 Dichlorobenzene)	다. (T) 1,3-Dichlorobenzene	다 다 기,4-Dichlorobenzene	رت Acenaphthene رح	் த Acenaphthylene	π) (¬/ Anthracene	் த் Benzo(a)anthracene	त த் Benzo(a)pyrene	ි සි Benzo(b)fluoranthene උ	் த උ	் த ட ர	က် G Chrysene	ਨੂੰ Dibenz(a,h)anthracene	က် G Fluoranthene (၂	ත් උ Fluorene	ନ୍ଦ୍ର Indeno(1,2,3-cd)Pyrene	ст) (¬С (¬	(元) Phenanthrene	δπ') (¬)
MW-1	7/28/2016 ¹																			
MW-1	8/5/2016	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12/15/2016					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5 <0.5	<0.5	<0.5
MW-1		<5	<5	<5	<0.5									<0.5						
MW-1	2/16/2017	<5 -	<5 -	<5 -	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-1	5/15/2017	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-2	7/28/2016 ¹																			
MW-2	8/5/2016	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-2	12/15/2016	<5	<5	<5	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	< 0.5	<0.5
MW-2	2/16/2017	<5	<5	<5	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5	<0.5
MW-2	5/15/2017	<5	<5	<5	3	1	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	3	<0.5	3	5	0.5 J
MW-3	7/28/2016 ¹																			
MW-3	8/5/2016	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3	12/15/2016	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3	2/16/2017	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3	5/15/2017	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11111-3	0/10/2011	~~	10	~~	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	~0. 5	40.0	40.0
QA-T	8/5/2016																			
QA-T	12/15/2016	<5	<5	<5																
QA-T	2/16/2017																			
QA-T	5/15/2017																			

Table 2

SVOCs and PAH Data Former Tidewater Service Station Phillips 66 Site 5677 Chevron Site 373378 7600 MacArthur Blvd. Oakland, California

		Addi	tional SV	OC's								PAH's								
	Date	1,2-Dichlorobenzene (o- Dichlorobenzene)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(b)fluoranthene	Benzo(g, h, i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)Pyrene	Naphthalene	Phenanthrene	Pyrene
Sample ID	Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)

Abbreviations and Notes

ID = Identification

MRL = Method reporting limit

PAH = Polycyclic Aromatic Hydrocarbons

SVOC = Semi-Volatile Organic Compounds

μg/L = micrograms per liter

< = Less than MRL

-- = Not applicable

1 = Well development performed

Table 3

Metals Data Former Tidewater Service Station Phillips 66 Site 5677 Chevron Site 373378 7600 MacArthur Blvd. Oakland, California

Aluminum	Boron Cadmium Calcium	Chromium Copper Iron	Lead Magnesium Manganese	Molybdenum Nickel Phosphorus	Silicon		Zinc
Sample ID Date Sampled (µg/L) (µg/L)	(µg/L) (µg/L) (µg/L)	(µg/L) (µg/L) (µg/L)	(µg/L) (µg/L) (µg/L)	(µg/L) (µg/L) (µg/L)	(µg/L) (µg/L) (µg/L)	(µg/L) (µg/L) (µg/L) (µg/L) (µ	ıg/L)
	1,140 <5.0 52,300		<15.0 22,300 151	3.7 J 3.2 J 37.8 J		,	20.0
	1,200 <5.0 55,300		<15.0 23,900 288	<10.0 <10.0 24.1 J	-,	,	20.0
	,	<15.0 <10.0 182 J	<15.0 23,100 150	<10.0 3.9 J 20.2 J		,	.6 J
MW-1 05/15/17 <200 62.3	1,070 <5.0 55,300	<15.0 <10.0 200	<15.0 23,600 136	<10.0 2.8 J 27.8 J	16,600 <5.0 105,000	10,800 <20.0 3.0 J 23.8 <2	20.0
MW-2 08/05/16 1,700 53.4	400 <5.0 52,100	,	<15.0 22,400 42	1.7 J 4.0 J 66.2 J		,	.1 J
MW-2 12/15/16 <200 57.3	404 <5.0 58,400		<15.0 25,200 3.5 J	<10.0 <10.0 37.4 J	,	,	20.0
MW-2 02/16/17 <200 43.2	383 <5.0 51,400		<15.0 22,300 <5	<10.0 <10.0 26.8 J	17,300 <5.0 111,000	15,200 <20.0 2.0 J 34.0 <2	20.0
MW-2 05/15/17 <200 56.7	384 <5.0 56,400	2.5 J <10.0 <200	<15.0 24,200 <5	<10.0 <10.0 39.1 J	16,400 <5.0 99,800	14,700 <20.0 2.9 J 30.1 <2	20.0
	1,040 <5.0 58,900 1,150 <5.0 63,900		<15.0 24,400 4.1 J <15.0 26,700 3.4 J	1.9 J <10.0 54.0 J <10.0 <10.0 41.0 J	-, ,	-,	20.0 20.0
MW-3 2/16/2017 <200 62.7	895 <5.0 62.700		<15.0 26,300 7.1	<10.0 <10.0 41.0 J		,	20.0
	1.020 <5.0 59.700		,	<10.0 <10.0 21.9 J		,	20.0 20.0
WW-3 5/15/2017 <200 61.6	1,020 <5.0 59,700	15.0 <10.0 <200	<15.0 24,800 3.3 J	<10.0 <10.0 30.13	15,200 <5.0 74,400	14,000 <20.0 3.1 J 20.0 <2	20.0
QA-T 8/5/2016							
QA-T 12/15/2016							
QA-T 2/16/2017							
QA-T 5/15/2017							

Table 3

Metals Data Former Tidewater Service Station Phillips 66 Site 5677 Chevron Site 373378 7600 MacArthur Blvd. Oakland, California

		Aluminum	Barium	Boron	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Phosphorus	Silicon	Silver	Sodium	Sulfur	Ti Li	Titanium	Vanadium	Zinc	
Sample ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	

Abbreviations and Notes

ID = Identification

MRL = Method reporting limit

μg/L = micrograms per liter

< = Less than MRL

-- = Not applicable

Attachment A Agency Correspondence

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY



REBECCA GEBHART, Acting Director

ENVIRONMENTAL HEALTH SERVICES ENVIRONMENTAL PROTECTION 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-657

July 19, 2016

Ms. Jillian Holloway
Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
(Sent via E-mail to: JillianHolloway@chevron.com)

Ms. Hong Gardner
632 Via Rialto Road
Oakland, CA 94619
(Sent via E-mail to: honggardner@gmail.com)

Mr. Ed Ralston - Program Manager Phillips 66 Company 76 Broadway Sacramento, CA 95818

Sent via e-mail to: Ed.C.Ralston@p66.com

Subject:

Technical Report Request for Fuel Leak Case RO0003087 and GeoTracker Global ID T10000003434, Hong Gardner Property, 7600 MacArthur Boulevard, Oakland, CA 94605-

2944

Ladies and Gentlemen:

Alameda County Department Environmental Health's (ACDEH) has reviewed the case file in addition to the *Site Investigation Report and Closure Request* (Report) dated December 1, 2014 and the *Geophysical Survey, Sanborn Map Review, and Addendum to Work Plan for Site Investigation* (Work Plan) dated April 29, 2014. The reports were prepared and submitted on your behalf by Conestoga-Rovers & Associates, now renamed GHD, in reference to the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP). Based on ACDEH staff review, we have determined that the site does not meet the LTCP General Criteria f (Secondary Source Removal), Media-Specific Criteria for Groundwater, or Media-Specific Criteria for Vapor Intrusion to Indoor Air.

ACDEH requests preparation of a Data Gap Work Plan that is supported by an updated Site Conceptual Model (SCM) to address the following data gaps.

TECHNICAL COMMENTS

1. General Criteria f – Secondary Source Has Been Removed to the Extent Practicable – "Secondary source" is defined as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Unless site attributes prevent secondary source removal (e.g. physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are required to undergo secondary source removal to the extent practicable as described in the policy. "To the extent practicable" means implementing a cost-effective corrective action which removes or destroys-in-place the most readily recoverable fraction of source-area mass. It is expected that most secondary mass removal efforts will be completed in one year or less. Following removal or destruction of the secondary source, additional removal or active remedial actions shall not be required by regulatory agencies unless (1) necessary to abate a demonstrated threat to human health or (2) the groundwater plume does not meet the definition of low threat as described in this policy.

ACDEH's review of the case files indicates that insufficient data and analysis has been presented to assess compliance with General Criteria f. The Geophysical Report included as Attachment C in the Work Plan describes finding six "High Strength Conductive Pulse Anomalies with Magnetic Gradiometer signature response" including "two relatively large projection anomalies along the back or northeast of the former building area that are found end to end in symmetry". One of the Work Plan's goals was to identify the buried conductive anomalies by hand augering borings in the areas of the anomalies to approximately 5-6 feet below ground surface. The Report, however, does not include the boring logs of the seven hand augered soil borings, or resolve the origin of the buried anomalies. Consequently, it has not been determined if secondary source remains at the site. Please present a strategy in the Updated Site Conceptual Model (SCM) and Data Gap Work Plan (described in Technical Comment 4 below) to address these Technical Comments and in an appendix include the boring logs of the seven hand augered soil borings. Alternatively, please provide justification of why the site satisfies this general criterion in the focused SCM described in Technical Comment 4 below.

2. LTCP Media Specific Criteria for Groundwater – To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed in the policy.

Our review of the case files indicate that the three groundwater monitoring wells, MW-1 through MW-3, were installed in September and October 2014 and according to the Work Plan, were to be sampled on a quarterly basis for the first year. Grab groundwater samples were obtained from each well during installation, but the wells were not developed or sampled. Therefore, insufficient data and analysis has been presented to support the requisite characteristics of groundwater gradient direction, plume stability, and length. Please present a strategy in the Updated SCM and Data Gap Work Plan discussed in Technical Comment 4 to determine groundwater plume stability and length.

- a. Monitoring Well Development and Quarterly Sampling and Rose Diagram: Please develop the three wells and sample for a minimum of four quarters to establish groundwater gradient direction, existence of a plume, plume stability, and length; Please prepare a rose diagram using data from each sampling event to confirm the groundwater gradient consistency and please provide an updated rose diagram with every quarterly sampling event:
- **b.** Groundwater Concentration and Elevation Graphs: Please provide graphs indicating groundwater concentrations and groundwater elevations together with each sampling event;
- c. Baseline Analytical: To establish a baseline, on a one-time basis and in the future, on an as needed basis, please analyze all groundwater samples for the full suite of Volatile Organic Compounds (VOCs) and please ensure detection limits are below proposed cleanup levels;
- d. LTCP Plume Lengths: To present another line of evidence supporting plume lengths, please prepare a figure indicating the average, 90th percentile, and maximum plume lengths for TPHg, benzene, and MTBE by referencing Table 1: Plume Characteristics, in the LTCP's Technical Justification for Groundwater Media-Specific Criteria. As shown in Attachment 2, Sample Figures of Adjacent Buildings with Basements, LTCP Plume Lengths, and Well Survey, please include the locations of the six water production wells identified in the one mile well survey included in the Report.
- **e.** Investigation-Derived Waste: Please submit the disposal documentation for the soil cuttings, rinsate water, and forth-coming well development and quarterly sampling events to ACDEH and to Geotracker, as described below.

3. LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air – The LTCP describes conditions, including bioattenuation (unsaturated) zones, which if met will assure that exposure to petroleum vapors in indoor air will not pose unacceptable health risks to human occupants of existing or future site buildings, and adjacent parcels. Appendices 1 through 4 of the LTCP criteria illustrate four potential exposure scenarios and describe characteristics and criteria associated with each scenario.

Our review of the case files indicates that the risk of vapor intrusion cannot be assessed due to the uncertainty that the secondary source(s) were removed. Therefore, ACDEH requests an evaluation of the media-specific criteria in the updated SCM and Data Gap Work Plan. Please assess potential vapor intrusion to indoor air to the adjacent residences.

If soil vapor wells are proposed, please ensure that your sampling strategy is consistent with the field sampling protocols described in the Department of Toxic Substances Control's Final Vapor Intrusion Guidance (October 2011) and the updated February 22, 2016 San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels Version 3. Consistent with the guidance, ACDEH requires installation of permanent vapor wells to assess temporal and seasonal variations in soil gas concentrations. Please include the soil vapor investigation with the Updated SCM and Data Gap Work Plan requested below.

4. Data Gap Investigation Work Plan and Site Conceptual Model — Please prepare a Data Gap Investigation Work Plan to address the technical comments listed above. Please support the scope of work in the Data Gap Investigation Work Plan with a focused SCM and Data Quality Objectives (DQOs) that relate the data collection to each LTCP criteria.

As a part of updating the SCM, please include a rose diagram and locations of houses and buildings that have basements in the immediate downgradient direction of the site similar to the example provided in Attachment 2, Sample Figures of Adjacent Buildings with Basements, LTCP Plume Lengths, and Well Survey.

- 5. Request for information The ACDEH case file for the subject site contains only the electronic files listed on our web site at http://www.acgov.org/ACDEH/lop/ust.htm. You are requested to submit electronic copies of all other reports including Phase I Reports, data, correspondence, etc. related to environmental investigations for this property not currently contained in our case file by the date specified in the Technical Report Request Section below. ACDEH requests e-mail notification of, and a list of the documents uploaded to Geotracker by the date listed below.
- 6. Electronic Submittal of Information (ESI) Compliance Site data and documents are maintained in two separate electronic databases ACDEH's ftp site and the SWRCB's GeoTracker database. Both databases act as repositories for regulatory directives and reports; however, only GeoTracker has the functionality to store electronic compliance data including analytical laboratory data for soil, vapor and water samples, monitoring well depth-to-water measurements, and surveyed location and elevation data for permanent sampling locations. Although the SWRCB is responsible for the overall operation and maintenance of the GeoTracker System, ACDEH, as lead regulatory agency, is responsible to ensure the GeoTracker database is complete and accurate for sites regulated under ACDEH's Environmental Cleanup Oversight Programs (SWRCB March 2011 document entitled Electronic Reporting Roles and Responsibilities).

A review of the case file and the State's GeoTracker database indicates that the site is not in compliance with California Code of Regulations, Title 23, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1, stating that beginning September 1, 2001, all analytical data, including monitoring well samples, submitted in a report to a regulatory agency as part of the UST or LUST program, must be transmitted electronically to the SWRCB GeoTracker system via the internet. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all

Ladies and Gentlemen RO0003087 July 19, 2016, Page 4

> groundwater cleanup programs, including the Site Cleanup Program (SCP) cases. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites was required in GeoTracker. At present missing data and documents include, but may not be limited to, EDF submittals, depth to groundwater data (GEO_WELL files), well data (GEO_XY, and GEO_Z files), work plans, and older reports (GEO REPORT files). Please upload requisite documents and data to GeoTracker. See Attachment 1 and the State's GeoTracker website for further details.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACDEH ftp site (Attention: Karel Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention and schedule:

- September 20, 2016 3rd Quarterly Groundwater Monitoring and Sampling Report, Well Development, and Waste Disposal File to be named: RO3087_GWM_R_yyyy-mm-dd
- September 20, 2016 Updated Site Conceptual Model and Data Gap Work Plan File to be named: RO3087 SCM WP yyyy-mm-dd
- January 20, 2017 4th Quarterly Monitoring and Sampling Report and Waste Disposal File to be named: RO3087 GWM R yyyy-mm-dd
- May 20, 2017 1st Quarterly Monitoring and Sampling Report and Waste Disposal File to be named: RO3087 GWM R yyyy-mm-dd
- September 20, 2017 -2nd Quarterly Monitoring and Sampling Report and Waste Disposal File to be named: RO3087 GWM R yyyy-mm-dd

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

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please send me an e-mail message at karel.detterman@acgov.org or call me at (510) 567-6708.

Sincerely,

Digitally signed by Karel Detterman DN: cn=Karel Detterman, o, ou,

email=karel.detterman@acgov.org, c=US

Date: 2016.07.19 16:16:17 -07'00'

Karel Detterman, PG

Hazardous Materials Specialist

Enclosures:

Attachment 1 - Responsible Party (ies) Legal Requirements / Obligations and Electronic

Report Upload (ftp) Instructions

Attachment 2, Sample Figures of Adjacent Buildings with Basements, LTCP Plume Lengths, and Well Survey

Ladies and Gentlemen RO0003087 July 19, 2016, Page 5

cc: Matthew Davis, LG, 732 Broadway Suite 301, Tacoma, WA 98402 (Sent via E-mail to: matthew.davis@ghd.com)

Donald Schwartz, Esq., 7960-B Soquel Drive, No. 291, Aptos, CA 95003 (Sent via E-mail to: donald@lawofficedonaldschwartz.com)

Dilan Roe, ACDEH (Sent via E-mail to: dilan.roe@acgov.org)

Karel Detterman, ACDEH (Sent via E-mail to: karel.detterman@acgov.org)

Electronic File, GeoTracker

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

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

ELECTRONIC SUBMITTAL OF REPORTS

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

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)

REVISION DATE: May 15, 2014

ISSUE DATE: July 5, 2005

PREVIOUS REVISIONS: October 31, 2005;

December 16, 2005; March 27, 2009; July 8, 2010,

July 25, 2010

SECTION: Miscellaneous Administrative Topics & Procedures

SUBJECT: Electronic Report Upload (ftp) Instructions

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

REQUIREMENTS

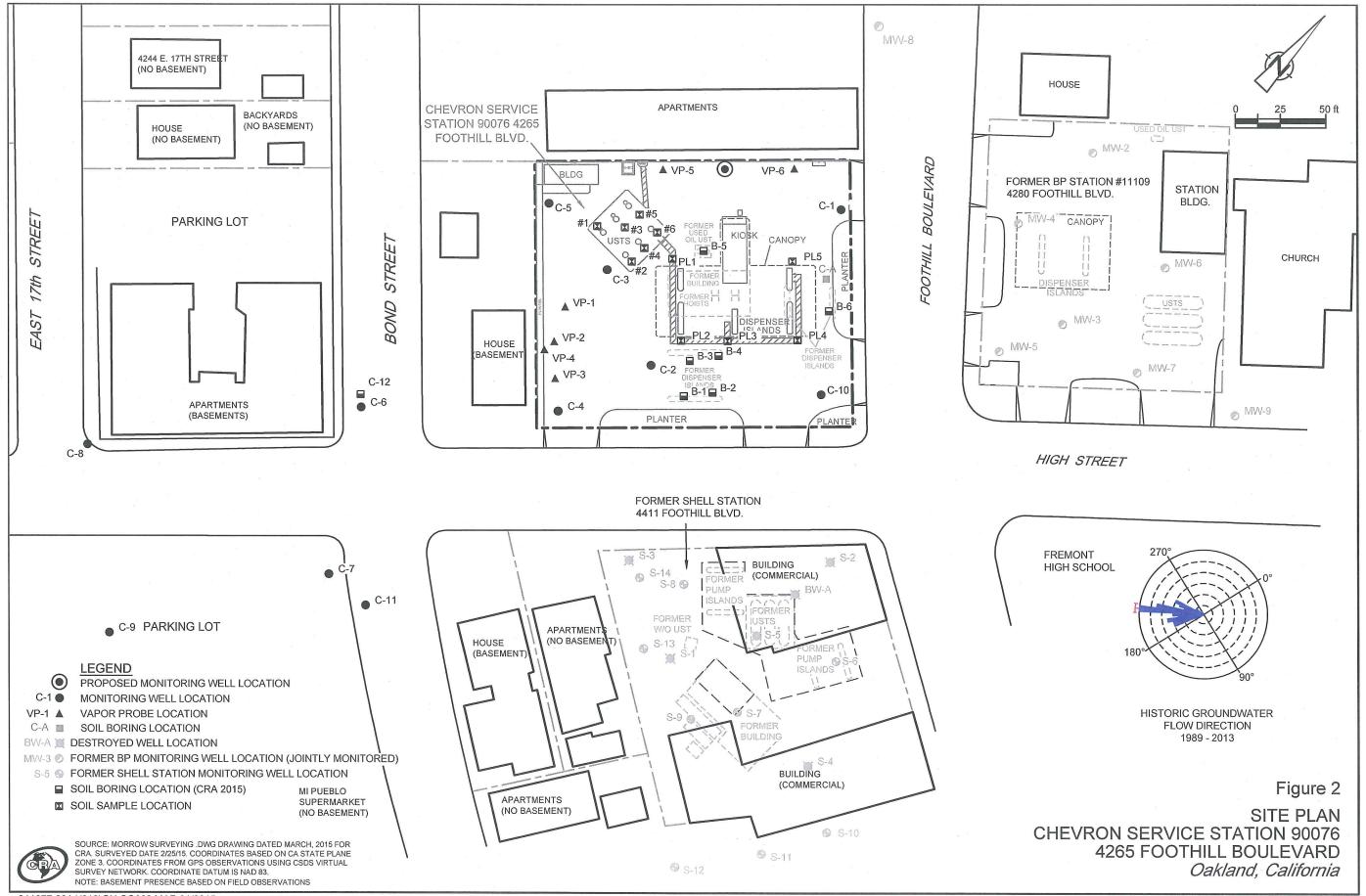
- Please do not submit reports as attachments to electronic mail.
- Entire report including cover letter must be submitted to the ftp site as a single portable document format (PDF) with no password protection.
- It is preferable that reports be converted to PDF format from their original format, (e.g.,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

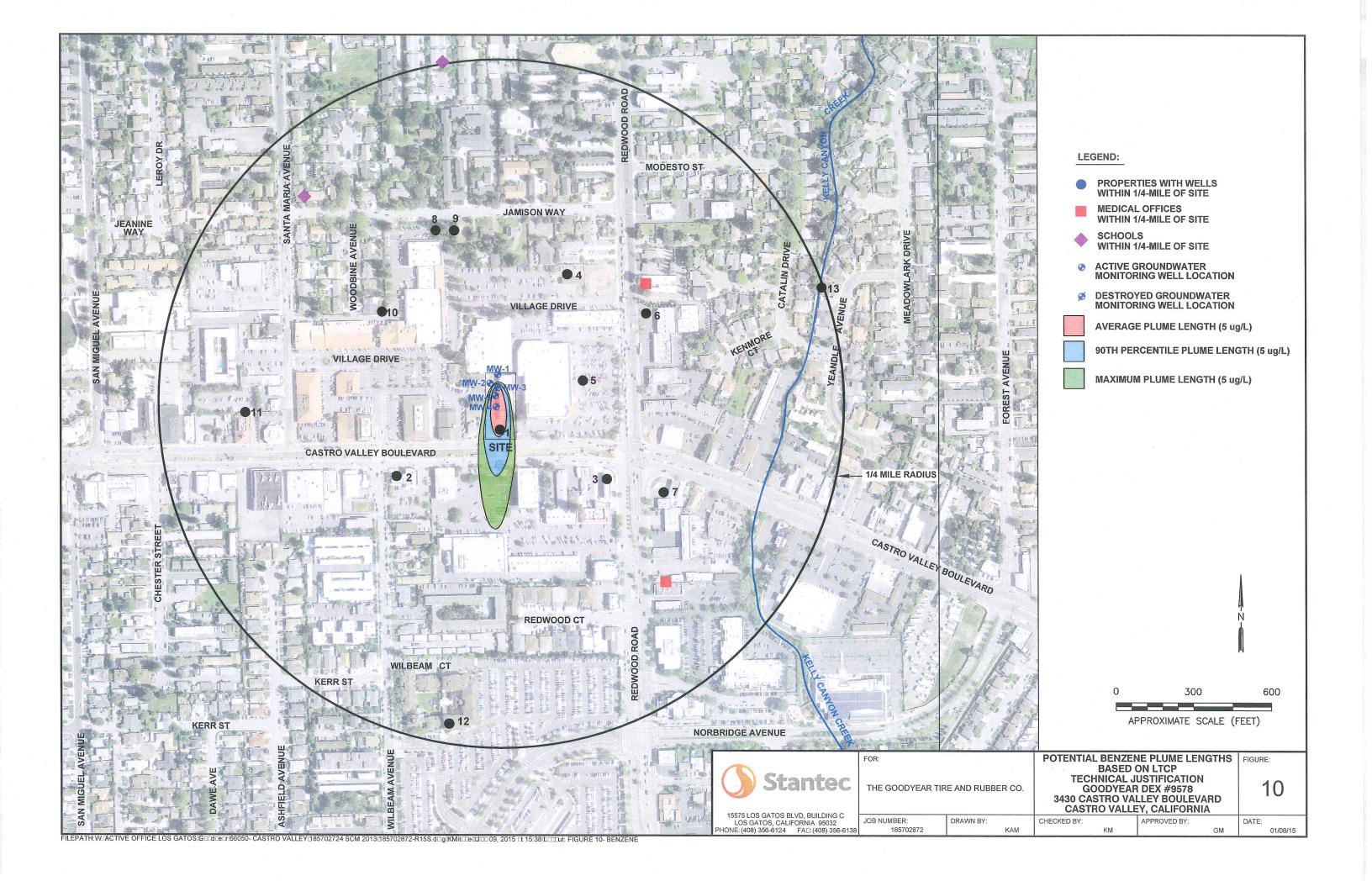
RO# Report Name_Year-Month-Date (e.g., RO#5555 WorkPlan 2005-06-14)

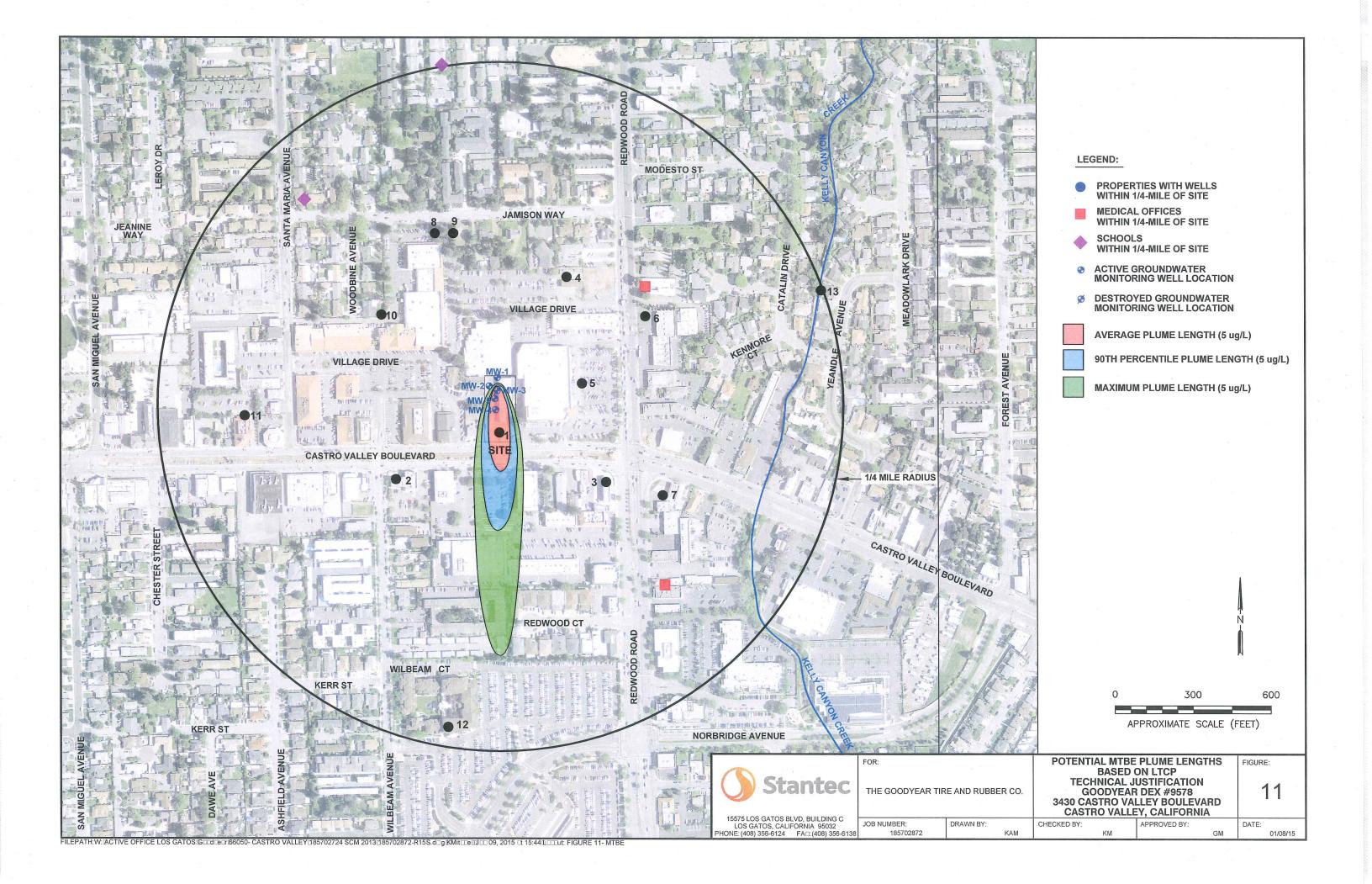
Submission Instructions

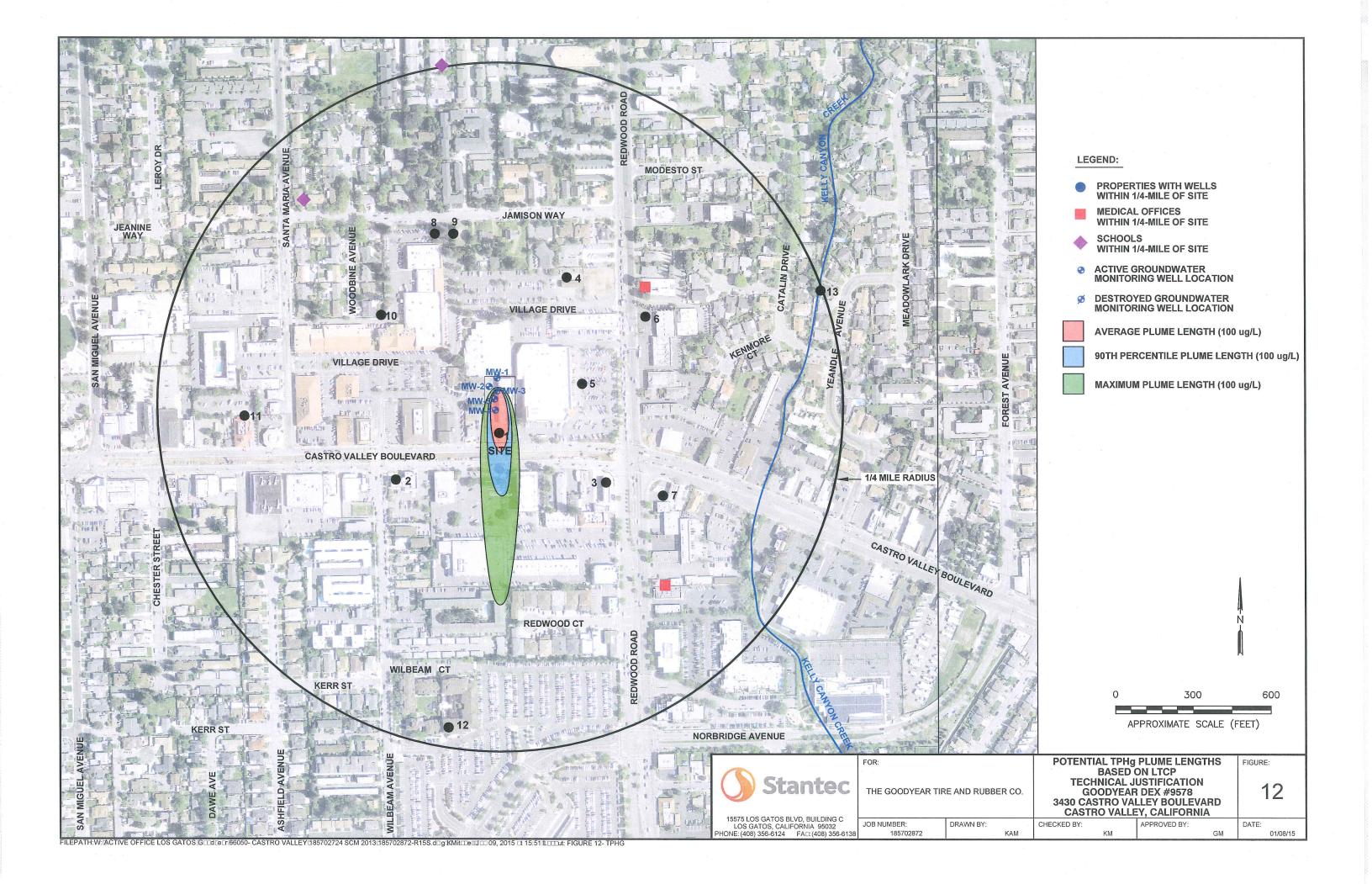
- 1) Obtain User Name and Password
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to deh.loptoxic@acgov.org
 - b) In the subject line of your request, be sure to include "ftp PASSWORD REQUEST" and in the body of your request, include the Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
 - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
 - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload). If site is a new case without an RO#, use the street address instead.
 - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

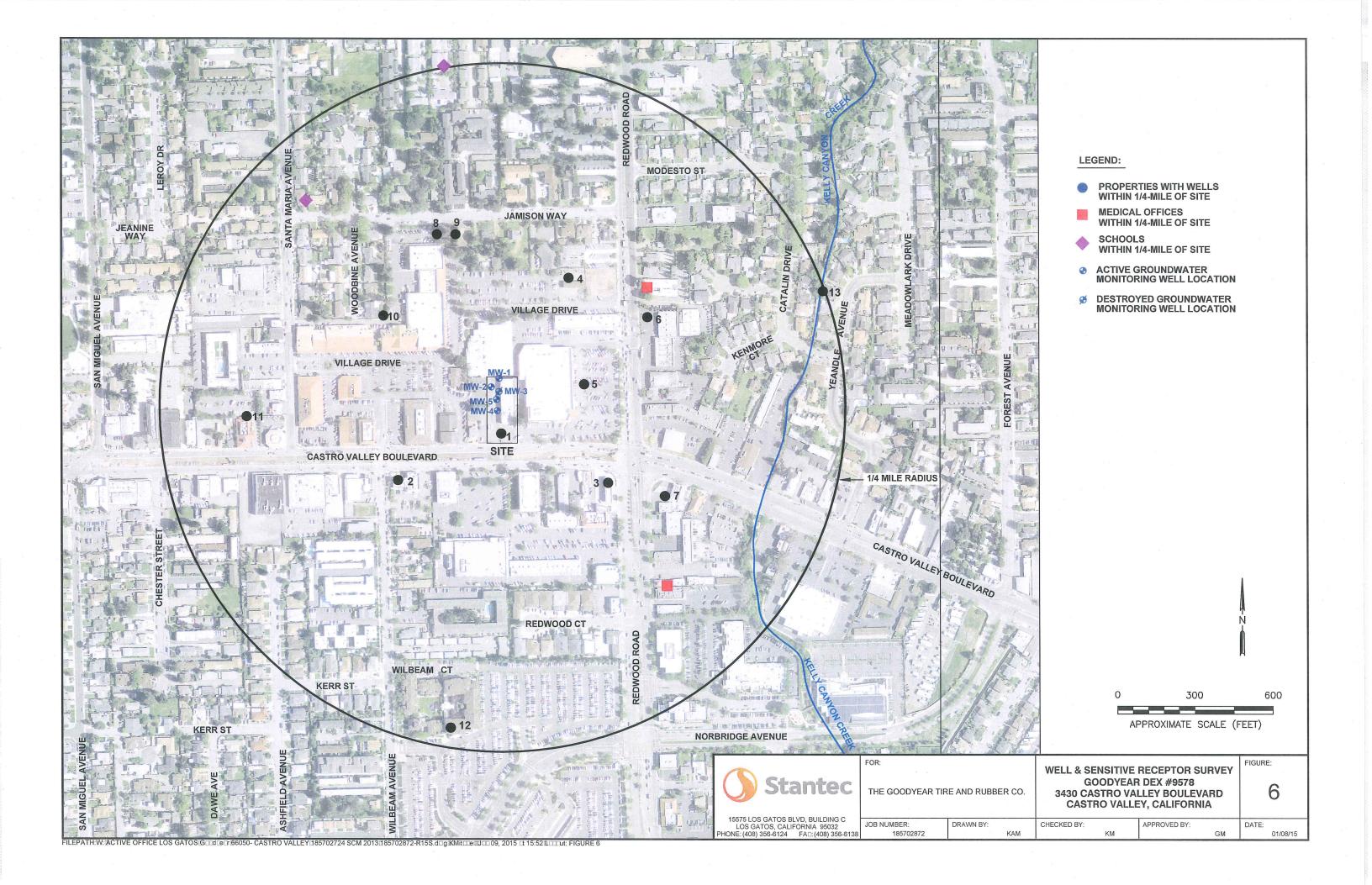
ATTACHMENT 2











APPENDIX C Wells Survey Results Former Goodyear Tire Store

3430 Castro Valley Boulevard Castro Valley, CA

	Owner/Site Name	Well Type	Drill Date	Total Depth	Address	Approximate Distance/Direction From Site
1	Merritt Tire Sale	Monitoring Wells	Sept 94, Dec 96, Aug 12	16-20	3430 Castro Valley Blvd.	0
2	CHEVRON #9-4930 / VALLEY CAR WASH	Monitoring Well	Oct-93	20	3369 Castro Valley Blvd.	460 SW
3	Ted Simas (XTRA OIL DBA SHELL STATION)	Monitoring Wells	Feb 90 & Aug 97	18-20	3495 Castro Valley Blvd.	510 SE
4	R. T. Nahas Company (UNOCAL)	Monitoring Wells	Dec 89	25-30	20405 Redwood Rd.	520 NE
5	R. T. Nahas Company	Monitoring Wells	Apr 92	29-37	20629 Redwood Rd	310 E
6	Exxon Oil	Unknown	ş	ş	20450 Redwood Rd.	650 NE
7	BP #11105 / SHELL 17-1445	Monitoring Well	Sept 92, July 95, Aug 09,	15-30	3519 Castro Valley Blvd.	700 SE
8	R. T. Nahas Company	Domestic/Destroyed	Dec 75	56	3559 JAMISON WAY	700 NNW
9	R. T. Nahas Company	Destroyed	ŝ	20 & 25	3533 JAMISON WAY	725 NNW
10	Horseshoe Drilling	Destroyed	Apr 96	20	20342 Woodbine Ave	600 NW
11	Mitzi Stockel	BOR/MON	Apr-90	8-23	3234 Castro Valley Blvd	1000 W
12	BART	Monitoring Well	Feb 93	16	21000 Wilbeam Ave.	1225 SSW
13	Robert D Rousey	Irrigation	May-77	28	20283 Yeandle Ave.	1325 ENE

Attachment B Monitoring Data Package

May 24, 2017 G-R #17155905

TO:

Mr. Matt Davis

GHD

732 Broadway, Suite 301 Tacoma, WA 98402

FROM: Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6805 Sierra Court, Suite G Dublin, California 94568

RE:

Former Tidewater Service Station

Chevron #373378 7600 MacArthur Blvd. Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Report Second Quarter Event of May 15, 2017

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

Trans 373378

WELL CONDITION STATUS SHEET

Client/								.			
Facility #:	Chevror	n #373378					Job #:	1715590	05		
Site Address:	7600 Ma	carthur Bl	vd.			-	Event Date:		5.15	3.17	
City:	Oakland	I, CA				-	Sampler:		FT		
WELL ID	Vault Frame Condition	Gasket/ O-Ring (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retaped	Apron Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) Inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y	REPLACE CAP	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken
Musi	DL						->	1		Maureleal	
ww.2	OL							1		Mamsa 8 - /2	
Mw.1 Mw.3	au						->		4	+ 1	
									,		
	- VIOVAL - 192										
Comments						\$2.2830	3,900 21 22 2				
100		·									

STANDARD OPERATING PROCEDURE GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells. Total well depths are measured annually.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

The purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



WELL MONITORING/SAMPLING **FIELD DATA SHEET**

Client/Facility#: Site Address: City:	Chevron #37 7600 Macarti Oakland, CA	nur Blvd.		Job Number: Event Date: Sampler:	17155905 5.15:17 Fr	(inclusive)
Well ID Well Diameter Total Depth Depth to Water Depth to Water Purge Equipment: Disposable Bailer Stainless Steel Baile Stack Pump Peristaltic Pump QED Bladder Pump Other:		XVF CI XVF Y ((Height of W Dia Pr Mc Pe QE	Volun Facto heck if water column	r (VF) 4"= 0 is less then 0.50 x3 case volume =	.66 5"= 1.02 6"= 1.50 12"= 5 Oft. Estimated Purge Volume: 10.0	gal. (2400 hrs) (2400 hrs) ft ft ft tion: circle one) r: ltr
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-water (2400 hr.)	te: 1253/5 te:	gpm. If yes, Tim pH 7.68 7.72	Weather Con Water Color: Sediment Des ne: Vol Conductivity (IS) mS µmhos/cm) 182 800 819	CLEAT scription:	SUNNU Odor: Y / 100 POPE gal. DTW @ Sampling: D.O. ORP (mg/L) (mV)	16.07
			ADODATORY IN	FORMATION		
SAMPLE ID	(#) CONTAINER	REFRIG.	ABORATORY IN PRESERV. TYPE	LABORATORY	ANALYSES	3
MW- (x voa vial	YES	HCL	EUROFINS	TPH-GRO(8015)/FULL LIST VOC's	
	2 x 500ml ambers	YES	NP	EUROFINS	TPH-DRO(8015)	
	2x 1 liter WM glass	YES	HCL	EUROFINS	OIL & GREASE SGT-HEM(1664A)	
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270)	
	2 x 250ml ambers	YES	NP	EUROFINS	NAPHTHALENE(8270)	
	x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED WEAR METALS(6010	0)
COMMENTS:						
Add/Replaced Ga	sket:	Add/Replaced	d Bolt:	Add/Replaced Loc	ck: Add/Replaced Plu	ıg:

Add/Replaced Plug: _____



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #37			Job Number:	17155905					
Site Address:	7600 Macarth	nur Blvd.		Event Date:	6.15.17	(inclusive)				
City:	Oakland, CA			Sampler:	FT					
Well ID Well Diameter	MW- 2			Date Monitored:	5.15.17					
Total Depth	36.00 ft.	•	Volu	me 3/4"= 0 or (VF) 4"= 0		3"= 0.38 12"= 5.80				
Depth to Water	15.41 ft.					12 - 5.60				
·	20.61	xVF	17	x3 case volume =	Estimated Purge Volume:	11.0 gal.				
Depth to Water	w/ 80% Recharge	[(Height of W	ater Column x 0.20) +	DTW]: 19.53	Time Started:	(2400 hrs)				
Purge Equipment:		Sa	impling Equipment:		Time Completed:	(2400 hrs)				
Disposable Bailer			sposable Bailer		Depth to Product:	ft				
Stainless Steel Baile	er ——V——		essure Bailer		Depth to Water:	ft				
Stack Pump			etal Filters		Hydrocarbon Thickne					
Peristaltic Pump			ristaltic Pump		Visual Confirmation/I	escription:				
QED Bladder Pump			ED Bladder Pump		Skimmer / Absorbant	Sock (circle one)				
Other:		Ot	her:			Skimmer: Itr				
					Amt Removed from V					
					Water Removed:					
Start Time (purge): 115 Weather Conditions: Supply										
				_	- 7.3					
Sample Time/Da				CLEA						
Approx. Flow Ra	***************************************	gpm.	Sediment De	· —	Nove					
Did well de-water	er? <u>No</u>	If yes, Tim	ne: Vo	olume:	gal. DTW @ Samplir	ng: 19-21				
Time (2400 hr.)	Volume (gal.)	рН	Conductivity (µS) / mS µmhos/cm)	Temperature		DRP mV)				
1123	3.5	7.75	781	20.1						
1131	7.0	7.79	760	20.5						
1139	11.0	7.83	745	20.7						
		1 2				11 de 1				
						' <u>'</u>				
			ABORATORY IN	FORMATION						
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY		ALYSES				
MW- 2	• x voa vial	YES	HCL	EUROFINS	TPH-GRO(8015)/FULL LIST	T VOC's(8260)				
	2 x 500ml ambers 2x 1 liter WM glass	YES YES	NP	EUROFINS	TPH-DRO(8015)	40044)				
	2-x 250ml ambers	YES	HCL NP	EUROFINS EUROFINS	OIL & GREASE SGT-HEM(1004A)				
	2 x 250ml ambers	YES	NP NP	EUROFINS	PAH's(8270) NAPHTHALENE(8270)					
	x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED WEAR METAL	S(6010)				
	in account poly			25.157.1115	I SOULTED THE WINE TAL	-5(5510)				
				1	<u> </u>					
COMMENTS:										
						· · · · · · · · · · · · · · · · · · ·				
Add/Replaced Ga	asket:	Add/Replace	d Bolt:	Add/Replaced Loc	ck: Add/Repla	ced Plug:				

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #37	3378		Job Number:	17155905	
Site Address:	7600 Macarth	ur Blvd.		Event Date:	5.15.17	(inclusive)
City:	Oakland, CA			Sampler:	FT	
Well ID	Mw-3			Date Monitored:	5.15.17	·
Well Diameter	2 in.	_	V	olume 3/4"= 0.	.02 1"= 0.04 2"= 0	.17 3"= 0.38
Total Depth	35.50 ft.	C5	Fa	actor (VF) 4"= 0.		
Depth to Water	14,58 ft.	☐ CH		mn is less then 0.50		-
	20.92	xVF 17	<u> </u>	_ x3 case volume =	Estimated Purge Volum	e:
Depth to Water	w/ 80% Recharge	[(Height of Wa	ater Column x 0.20) + DTWJ: <u>18.7(</u>	2	
				,	Time Started:	(2400 hrs) I:(2400 hrs)
Purge Equipment:			mpling Equipmen	t:	, i	t: (2400 hrs)
Disposable Bailer			sposable Bailer		Depth to Water:	
Stainless Steel Baile	er		essure Bailer		Hydrocarbon Th	
Stack Pump Peristaltic Pump			etal Filters ristaltic Pump		Visual Confirmat	
QED Bladder Pump			ED Bladder Pump		<u> </u>	
Other:			her:			rbant Sock (circle one) om Skimmer: ltr
						6m Skimmer: ltr om Well: ltr
					N .	:ttr
Start Time (purge			Weather C		SUHH	
	ate: <u>1055 /5</u>	15.17		or: <u>CLEA</u>	_Odor: Y /🐠 💆	
Approx. Flow Ra		gpm.		Description:	NOPE	
Did well de-wate	is	If yes, Tim	ne:\	Volume:	_ gal. DTW @ San	npling: 18.70
Time			Conductivity	Temperature	D.O.	ORP
(2400 hr.)	Volume (gal.)	рH	(US)/ mS	(© / F)	(mg/L)	(mV)
1023	35	702	μmhos/cm)	191		_
1031	7.0	179	771	19.0		
1039	1).0	7.73	809	19.0		
				INFORMATION		
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYP			ANALYSES
MIVV- 5	x voa vial x 500ml ambers	YES YES	HCL NP	EUROFINS EUROFINS	TPH-GRO(8015)/FULL TPH-DRO(8015)	LIST VOC's(8260)
	2 x 1 liter WM glass	YES	HCL	EUROFINS	OIL & GREASE SGT-H	FM(1664A)
	2x 250ml ambers	YES	NP	EUROFINS	PAH's(8270)	
	2 x 250ml ambers	YES	NP	EUROFINS	NAPHTHALENE(8270)	
	x 250ml poly	YEŞ	HNO3	EUROFINS	DISSOLVED WEAR MI	ETALS(6010)
	-					
004447777		· · · · · · · · · · · · · · · · · · ·	<u> </u>			
COMMENTS:						

Add/Replaced Lock: _____

Add/Replaced Plug: ___

Chevron California Region Analysis Request/Chain of Custody

💸 eurofins	Lancaster Labor	atories		Acct	.#					roup	#				_ Sa	Envir	#			nly				 -	
f	Environmental Client Inf	ormatio	n					Ma	trix		I	-			•	nalys				od			7	101	
Facility # SS#373378-OML				1000000	2424	-19-		IVIA	LIIX						AI	lalys	e5 :	Key	uesi	ea a			S	CR #:	<u> </u>
				100000	70-70-1	\dashv	П	X						 X						رادو				Results in Dry W	eight
Site Address 7600 MACARTH	UR BLVD., OA	KLAND		h			nt [:								20	-HEN				J value reporting	needed
GI	HDMD		Lead Consu Davis	litant			ediment	Ground	Surface			8260 🔯	l g	Gel Cleanup	annb				LOID	67-1		(017		Must meet lowes limits possible for	
Consultant/Office Getter-Ryan Inc.	, 6805 Sierra C	ourt, St	lite G, D	ublin, C	A 94	568	Sec	්	Su		of Containers	826	8260		Gel Cleanup	Vocs			Ž,	Se		8		compounds 8021 MTBE Conf	
Consultant Project Mgr. Deanna L. Harding, deanna@grinc.com								Cont	<u>-</u>	8015*	without Silica		ST. V	s	Method	WEAN Method	a D Sie	(0	たる		Confirm highest h	-			
Consultant Phone # (925) 551-7444 >	(180							Potable	NPDES	Air	er of	8021	801	5 with	8015 with Silica	Ę	Oxygenates			6 2 â	9270	THAL		Run oxy':	s on highest hit
Sampler Fue N	(TELNINON					Composite					Number	- MTBE	8	TPH-DRO 8015	RO 801	Full	ő	ead	Dissolved [4	. S	コー			
Sample Identification Soil Collected Depth Date Time				rab	omb	Soil	1	water	ē	Total	BTEX -	TPH-GRO	유민	TPH-DRO	8260 F		Total Lead	ssolv	7/2	PAH	47			.1	
	QA	Берип	17.5.15	Time	0	9	S	\\ \\ \	7	0	1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		Ë	Ė	8	i	ĭ	۵	4	1-0-		+	Remai	
	MW-1		17.3.0	1253	X	\dashv		1			15		文	X		X			X	X	X	$\sqrt{}$	\dashv	REPORT AR	E: Al, Ba,
	MW-2			1152	X			\vdash			15		X	X					$\overline{\chi}$	分	刘	ŹΤ		B, Cd, Ca, C Pb, Mg, Mo,	
	MW-3	,	4	1055	X	\Box			1		15		X	X		X			\angle	X	X	X		Si, Ag, Na, S	, Sn, Tl, V
						_																		: and	Zn
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																				\neg			1		
	me Requested (•			Relinq	Jished	by)				Date	5.1	5	Time			Recei	ved by			11	/	Date	Time
Standard	5 day		4 day		Relinqu	uished	by (Date			Time			Recei	ved by	7 >	3	100	1	5 / / 5/) Date	/ 4 9 0 Time
72 hour	48 hour		24 hour		ľ		`	_												•					
Data Package	(circle if required)		EDF	/EDD	Relinq	uished	by					Date			Time			Recei	ved by					Date	Time
Type I - Fuil Type VI (Raw Data) Relinquis		nuich.	od b	v Cor	nmer	cial C	`arric							Poor:	ved by					Dete	Time				
EDD (circle if req	EDD (circle if required)				4uisii PS_		•			/arrier		Oth	ner_				I VOCOI	veu by					Date	Time	
EDFFLAT (defaul	t) Other:		_								Rec					°C		Cı	ıstoc	ly Se	als i	Intact?	•	Yes	No

Attachment C Laboratory Analytical Report

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 GHD Suite 140 15575 SW Sequoia Parkway Portland OR 97224

Report Date: May 26, 2017

Project: 373378 Tidewater Oakland

Submittal Date: 05/16/2017 Group Number: 1801815 PO Number: 4072862 State of Sample Origin: CA

 Client Sample Description
 (LL) #

 QA-T-170515 Water
 8995362

 MW-1-W-170515 Grab Groundwater
 8995363

 MW-2-W-170515 Grab Groundwater
 8995364

 MW-3-W-170515 Grab Groundwater
 8995365

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/. To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy ToGettler-Ryan, Inc.Attn: Gettler RyanElectronic Copy ToGHDAttn: Matt DavisElectronic Copy ToChevronAttn: Report ContactElectronic Copy ToGHDAttn: Chevron EDF

Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



Analysis Report

Account

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: QA-T-170515 Water

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995362 LL Group # 1801815

13534

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 GHD

Suite 140

15575 SW Sequoia Parkway

Portland OR 97224

MBOQA

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-8	46 8260B	ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Methyl Tertiary Butyl Ethe	er 1634-04-4	N.D.	0.5	1	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Vol	Latiles SW-8	46 8015B	ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C1	n.a.	N.D.	50	100	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory	Sample	Analy	ysis	Record
------------	--------	-------	------	--------

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z171382AA	05/18/2017 07:	50 Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z171382AA	05/18/2017 07:	50 Anita M Dale	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	17142B20A	05/23/2017 02:	48 Jeremy C Giffin	1
	C6-C12						
01146	GC VOA Water Prep	SW-846 5030B	1	17142B20A	05/23/2017 02:	48 Jeremy C Giffin	1

^{*=}This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-1-W-170515 Grab Groundwater

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995363 LL Group # 1801815 Account # 13534

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 12:53 by FT GHD

Suite 140

15575 SW Sequoia Parkway

Portland OR 97224

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	20	1
10335	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10335	Benzene	71-43-2	N.D.	0.5	1	1
10335	Bromobenzene	108-86-1	N.D.	1	5	1
10335	Bromochloromethane	74-97-5	N.D.	1	5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1	1
10335	Bromoform	75-25-2	N.D.	0.5	4	1
10335	Bromomethane	74-83-9	N.D.	0.5	1	1
10335	2-Butanone	78-93-3	N.D.	3	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5	20	1
10335	n-Butylbenzene	104-51-8	N.D.	1	5	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	5	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	5	1
10335	Carbon Disulfide	75-15-0	N.D.	1	5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1	1
10335	Chloroethane	75-00-3	N.D.	0.5	1	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	2	10	1
	2-Chloroethyl vinyl ether may preserve this sample.					
10335	Chloroform	67-66-3	N.D.	0.5	1	1
10335	Chloromethane	74-87-3	N.D.	0.5	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	5	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1	1
10335	Dibromomethane	74-95-3	N.D.	0.5	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.5	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	0.5	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1	1
10335	Ethanol	64-17-5	N.D.	50	250	1
10335	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10335	Freon 113	76-13-1	N.D.	2	10	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	5	1

^{*=}This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-1-W-170515 Grab Groundwater

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995363

LL Group # 1801815 Account # 13534

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 12:53 by FT GHD

Suite 140

15575 SW Sequoia Parkway

Portland OR 97224

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	ug/l	
10335	2-Hexanone	591-78-6	N.D.	3	10	1
10335	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10335	Isopropylbenzene	98-82-8	N.D.	1	5	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
10335	Methylene Chloride	75-09-2	N.D.	2	4	1
10335	Naphthalene	91-20-3	N.D.	1	5	1
10335	n-Propylbenzene	103-65-1	N.D.	1	5	1
10335	Styrene	100-42-5	N.D.	1	5	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1	1
10335	Toluene	108-88-3	N.D.	0.5	1	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	5	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	5	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1	1
10335	o-Xylene	95-47-6	N.D.	0.5	1	1
GC/MS	Semivolatiles SW-846	8270C	ug/l	ug/l	ug/l	
14249	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
14249	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
14249	Anthracene	120-12-7	N.D.	0.1	0.5	1
14249	Benzo(a) anthracene	56-55-3	N.D.	0.1	0.5	1
14249	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14249	Benzo(b) fluoranthene	205-99-2	N.D.	0.1	0.5	1
14249	Benzo(q,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
14249	Benzo(k) fluoranthene	207-08-9	N.D.	0.1	0.5	1
14249	Chrysene	218-01-9	N.D.	0.1	0.5	1
14249	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14249	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14249	Fluorene	86-73-7	N.D.	0.1	0.5	1
14249	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14249	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14249	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14249	Pyrene	129-00-0	N.D.	0.1	0.5	1
CC Val	latiles SW-846	9015D	ug/l	ug/l	ug/l	
			_	_	_	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

^{*=}This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-1-W-170515 Grab Groundwater

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995363 LL Group # 1801815

Account # 13534

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 12:53 by FT

Suite 140

GHD

15575 SW Sequoia Parkway

Portland OR 97224

MB001

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC Pe	troleum	SW-846	8015B	ug/l	ug/l	ug/l	
Hydro	carbons						
06609	TPH-DRO CA C10-C28		n.a.	N.D.	50	110	1
Metal	S	SW-846	6010B	mg/l	mg/l	mg/l	
07058	Manganese		7439-96-5	0.136	0.0018	0.0050	1
		SW-846	6010B	ug/l	ug/l	ug/l	
01743	Aluminum		7429-90-5	N.D.	86.8	200	1
07046	Barium		7440-39-3	62.3	1.1	5.0	1
08014	Boron		7440-42-8	1,070	8.3	50.0	1
07049	Cadmium		7440-43-9	N.D.	0.49	5.0	1
01750	Calcium		7440-70-2	55,300	38.2	200	1
07051	Chromium		7440-47-3	N.D.	1.8	15.0	1
07053	Copper		7440-50-8	N.D.	4.1	10.0	1
01754	Iron		7439-89-6	N.D.	74.7	200	1
07055	Lead		7439-92-1	N.D.	6.2	15.0	1
01757	Magnesium		7439-95-4	23,600	19.0	100	1
07060	Molybdenum		7439-98-7	N.D.	1.7	10.0	1
07061	Nickel		7440-02-0	2.8 J	2.8	10.0	1
10143	Phosphorus		7723-14-0	27.8 J	10.0	100	1
01765	Silicon		7440-21-3	16,600	19.2	50.0	1
07066	Silver		7440-22-4	N.D.	1.9	5.0	1
01767	Sodium		7440-23-5	105,000	173	1,000	1
12004	Sulfur		7704-34-9	10,800	83.3	500	1
07069	Tin		7440-31-5	N.D.	7.1	20.0	1
07070	Titanium		7440-32-6	3.0 J	1.3	10.0	1
07071	Vanadium		7440-62-2	23.8	1.6	5.0	1
07072	Zinc		7440-66-6	N.D.	5.4	20.0	1
Wet C	hemistry	EPA 166	4A	ug/l	ug/l	ug/l	
00612	SGT-HEM (TPH)		n.a.	N.D.	1,400	5,000	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

	Laboratory Sample Analysis Record									
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor			
10335	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W171451AA	05/25/2017 17:15	Linda C Pape	1			
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W171451AA	05/25/2017 17:15	Linda C Pape	1			

^{*=}This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-1-W-170515 Grab Groundwater

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995363 LL Group # 1801815 Account # 13534

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 12:53 by FT GHD

Suite 140

15575 SW Sequoia Parkway

Portland OR 97224

Laboratory Sample Analysis Record										
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor		
14249	PAHs 8270C Water	SW-846 8270C	1	17137WAL026	05/18/2017	09:19	Joseph M Gambler	1		
07807	BNA Water Extraction	SW-846 3510C	1	17137WAL026	05/17/2017	21:10	Christine Gleim	1		
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17142B20A	05/23/2017	04:38	Jeremy C Giffin	1		
01146	GC VOA Water Prep	SW-846 5030B	1	17142B20A	05/23/2017	04:38	Jeremy C Giffin	1		
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	171370017A	05/18/2017	17:38	Thomas C Wildermuth	1		
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	171370017A	05/17/2017	18:00	Ryan J Dowdy	1		
01743	Aluminum	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07046	Barium	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
08014	Boron	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07049	Cadmium	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
01750	Calcium	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07051	Chromium	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07053	Copper	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
01754	Iron	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07055	Lead	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
01757	Magnesium	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07058	Manganese	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07060	Molybdenum	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07061	Nickel	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
10143	Phosphorus	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
01765	Silicon	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07066	Silver	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
01767	Sodium	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
12004	Sulfur	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07069	Tin	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07070	Titanium	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07071	Vanadium	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
07072	Zinc	SW-846 6010B	1	171370184802	05/18/2017	11:31	Scott R Yanos	1		
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	171370184802	05/18/2017	00:55	Denise L Trimby	1		
00612	SGT-HEM (TPH)	EPA 1664A	1	17138807801A	05/18/2017	10:39	Yolunder Y Bunch	1		

^{*=}This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-2-W-170515 Grab Groundwater

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995364 LL Group # 1801815 Account # 13534

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 11:52 by FT GHD

Suite 140

15575 SW Sequoia Parkway

Portland OR 97224

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846 8	260B	ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	20	1
10335	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10335	Benzene	71-43-2	N.D.	0.5	1	1
10335	Bromobenzene	108-86-1	N.D.	1	5	1
10335	Bromochloromethane	74-97-5	N.D.	1	5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1	1
10335	Bromoform	75-25-2	N.D.	0.5	4	1
10335	Bromomethane	74-83-9	N.D.	0.5	1	1
10335	2-Butanone	78-93-3	N.D.	3	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5	20	1
10335	n-Butylbenzene	104-51-8	N.D.	1	5	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	5	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	5	1
10335	Carbon Disulfide	75-15-0	N.D.	1	5	1
10335	Carbon Tetrachloride	56-23-5	2	0.5	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1	1
10335	Chloroethane	75-00-3	N.D.	0.5	1	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	2	10	1
	2-Chloroethyl vinyl ether may may preserve this sample.					
10335	Chloroform	67-66-3	N.D.	0.5	1	1
10335	Chloromethane	74-87-3	N.D.	0.5	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	5	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1	1
10335	Dibromomethane	74-95-3	N.D.	0.5	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.5	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	0.5	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1	1
10335	Ethanol	64-17-5	N.D.	50	250	1
10335	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10335	Freon 113	76-13-1	N.D.	2	10	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	5	1

^{*=}This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-2-W-170515 Grab Groundwater

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995364 LL Group # 1801815 Account # 13534

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 11:52 by FT GHD

Suite 140

15575 SW Sequoia Parkway

Portland OR 97224

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	ug/l	
10335	2-Hexanone	591-78-6	N.D.	3	10	1
10335	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10335	Isopropylbenzene	98-82-8	N.D.	1	5	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
10335	Methylene Chloride	75-09-2	N.D.	2	4	1
10335	Naphthalene	91-20-3	N.D.	1	5	1
10335	n-Propylbenzene	103-65-1	N.D.	1	5	1
10335	Styrene	100-42-5	N.D.	1	5	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1	1
10335	Toluene	108-88-3	N.D.	0.5	1	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	5	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	5	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1	1
10335	o-Xylene	95-47-6	N.D.	0.5	1	1
GC/MS	Semivolatiles SW-846	8270C	ug/l	ug/l	ug/l	
14249	Acenaphthene	83-32-9	3	0.1	0.5	1
14249	Acenaphthylene	208-96-8	1	0.1	0.5	1
14249	Anthracene	120-12-7	0.9	0.1	0.5	1
14249	Benzo(a) anthracene	56-55-3	N.D.	0.1	0.5	1
14249	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14249	Benzo(b) fluoranthene	205-99-2	N.D.	0.1	0.5	1
14249	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
14249	Benzo(k) fluoranthene	207-08-9	N.D.	0.1	0.5	1
14249	Chrysene	218-01-9	N.D.	0.1	0.5	1
14249	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14249	Fluoranthene	206-44-0	0.9	0.1	0.5	1
14249	Fluorene	86-73-7	3	0.1	0.5	1
14249	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14249	Naphthalene	91-20-3	3	0.1	0.5	1
14249	Phenanthrene	85-01-8	5	0.1	0.5	1
14249	Pyrene	129-00-0	0.5 J	0.1	0.5	1
GC Vol	Latiles SW-846	8015B	ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1
01/28	IFII-GRO N. CA WALEE C6-C12	11.α.	IN.D.	50	T00	1

^{*=}This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-2-W-170515 Grab Groundwater

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995364 LL Group # 1801815

Account # 13534

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 11:52 by FT GHD

Suite 140

15575 SW Sequoia Parkway

Portland OR 97224

MBO02

CAT No.	Analysis Name		CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC Pe	troleum	SW-846	8015B	ug/l		ug/l	ug/l	
Hydro	carbons							
06609	TPH-DRO CA C10-C28		n.a.	79	J	50	100	1
Metal	5	SW-846	6010B	mg/l		mg/l	mg/l	
07058	Manganese		7439-96-5	N.D.		0.0018	0.0050	1
		SW-846	6010B	ug/l		ug/l	ug/l	
01743	Aluminum		7429-90-5	N.D.		86.8	200	1
07046	Barium		7440-39-3	56.7		1.1	5.0	1
08014	Boron		7440-42-8	384		8.3	50.0	1
07049	Cadmium		7440-43-9	N.D.		0.49	5.0	1
01750	Calcium		7440-70-2	56,400		38.2	200	1
07051	Chromium		7440-47-3	2.5	J	1.8	15.0	1
07053	Copper		7440-50-8	N.D.		4.1	10.0	1
01754	Iron		7439-89-6	N.D.		74.7	200	1
07055	Lead		7439-92-1	N.D.		6.2	15.0	1
01757	Magnesium		7439-95-4	24,200		19.0	100	1
07060	Molybdenum		7439-98-7	N.D.		1.7	10.0	1
07061	Nickel		7440-02-0	N.D.		2.8	10.0	1
10143	Phosphorus		7723-14-0	39.1	J	10.0	100	1
01765	Silicon		7440-21-3	16,400		19.2	50.0	1
07066	Silver		7440-22-4	N.D.		1.9	5.0	1
01767	Sodium		7440-23-5	99,800		173	1,000	1
12004	Sulfur		7704-34-9	14,700		83.3	500	1
07069	Tin		7440-31-5	N.D.		7.1	20.0	1
07070	Titanium		7440-32-6	2.9	J	1.3	10.0	1
07071	Vanadium		7440-62-2	30.1		1.6	5.0	1
07072	Zinc		7440-66-6	N.D.		5.4	20.0	1
Wet C	hemistry	EPA 166	54A	ug/l		ug/l	ug/l	
00612	SGT-HEM (TPH)		n.a.	N.D.		1,400	5,000	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

	Laboratory Sample Analysis Record							
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor	
10335	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W171451AA	05/25/2017 17:39	Linda C Pape	1	
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W171451AA	05/25/2017 17:39	Linda C Pape	1	

^{*=}This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-2-W-170515 Grab Groundwater

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Group # 1801815 Account # 13534

LL Sample # WW 8995364

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 11:52 by FT GHD

Suite 140

15575 SW Sequoia Parkway

Portland OR 97224

	Laboratory Sample Analysis Record							
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	ime	Analyst	Dilution Factor
14249	PAHs 8270C Water	SW-846 8270C	1	17137WAL026	05/18/2017	09:48	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	17137WAL026	05/17/2017	21:10	Christine Gleim	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17142B20A	05/23/2017	05:05	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17142B20A	05/23/2017	05:05	Jeremy C Giffin	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	171370017A	05/18/2017	18:00	Thomas C Wildermuth	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	171370017A	05/17/2017	18:00	Ryan J Dowdy	1
01743	Aluminum	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07046	Barium	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
08014	Boron	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07049	Cadmium	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
01750	Calcium	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07051	Chromium	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07053	Copper	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
01754	Iron	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07055	Lead	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
01757	Magnesium	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07058	Manganese	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07060	Molybdenum	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07061	Nickel	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
10143	Phosphorus	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
01765	Silicon	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07066	Silver	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
01767	Sodium	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
12004	Sulfur	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07069	Tin	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07070	Titanium	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07071	Vanadium	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
07072	Zinc	SW-846 6010B	1	171370184802	05/18/2017	13:10	Scott R Yanos	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	171370184802	05/18/2017	00:55	Denise L Trimby	1
00612	SGT-HEM (TPH)	EPA 1664A	1	17138807801A	05/18/2017	10:39	Yolunder Y Bunch	1

^{*=}This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-3-W-170515 Grab Groundwater

Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995365

LL Group # 1801815 Account # 13534

Project Name: 373378 Tidewater Oakland

Submitted: 05/16/2017 09:32

Reported: 05/26/2017 13:02

Collected: 05/15/2017 10:55 by FT GHD

Suite 140

15575 SW Sequoia Parkway

19979 BN Bequeta Tainway

Portland OR 97224

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	20	1
10335	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10335	Benzene	71-43-2	N.D.	0.5	1	1
10335	Bromobenzene	108-86-1	N.D.	1	5	1
10335	Bromochloromethane	74-97-5	N.D.	1	5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1	1
10335	Bromoform	75-25-2	N.D.	0.5	4	1
10335	Bromomethane	74-83-9	N.D.	0.5	1	1
10335	2-Butanone	78-93-3	N.D.	3	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5	20	1
10335	n-Butylbenzene	104-51-8	N.D.	1	5	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	5	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	5	1
10335	Carbon Disulfide	75-15-0	N.D.	1	5	1
10335	Carbon Tetrachloride	56-23-5	1	0.5	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1	1
10335	Chloroethane	75-00-3	N.D.	0.5	1	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	2	10	1
	2-Chloroethyl vinyl ether may preserve this sample.	•				
10335	Chloroform	67-66-3	0.9 J	0.5	1	1
10335	Chloromethane	74-87-3	N.D.	0.5	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	5	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1	1
10335	Dibromomethane	74-95-3	N.D.	0.5	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.5	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	0.5	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1	1
10335	Ethanol	64-17-5	N.D.	50	250	1
10335	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10335	Freon 113	76-13-1	N.D.	2	10	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	5	1

^{*=}This limit was used in the evaluation of the final result



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Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995365

LL Group # 1801815 Account # 13534

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CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	ug/l	
10335	2-Hexanone	591-78-6	N.D.	3	10	1
10335	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10335	Isopropylbenzene	98-82-8	N.D.	1	5	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
10335	Methylene Chloride	75-09-2	N.D.	2	4	1
10335	Naphthalene	91-20-3	N.D.	1	5	1
10335	n-Propylbenzene	103-65-1	N.D.	1	5	1
10335	Styrene	100-42-5	N.D.	1	5	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1	1
10335	Toluene	108-88-3	N.D.	0.5	1	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	5	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	5	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1	1
10335	o-Xylene	95-47-6	N.D.	0.5	1	1
GC/MS	Semivolatiles SW-846	8270C	ug/l	ug/l	ug/l	
14249	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
14249	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
14249	Anthracene	120-12-7	N.D.	0.1	0.5	1
14249	Benzo(a) anthracene	56-55-3	N.D.	0.1	0.5	1
14249	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14249	Benzo(b) fluoranthene	205-99-2	N.D.	0.1	0.5	1
14249	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
14249	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14249	Chrysene	218-01-9	N.D.	0.1	0.5	1
14249	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14249	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14249	Fluorene	86-73-7	N.D.	0.1	0.5	1
14249	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14249	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14249	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14249	Pyrene	129-00-0	N.D.	0.1	0.5	1
GC Vol	latiles SW-846	8015B	ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

^{*=}This limit was used in the evaluation of the final result



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Facility# 373378 CRAW

7600 MacArthur Blv-Oakland T10000003434

LL Sample # WW 8995365 LL Group # 1801815

Account # 13534

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Submitted: 05/16/2017 09:32

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GHD

15575 SW Sequoia Parkway

Portland OR 97224

MBO03

CAT No.	Analysis Name		CAS Number	Result		Method Detection Limit	Limit of Quantitation	Dilution Factor
GC Pe	troleum	SW-846	8015B	ug/l		ug/l	ug/l	
Hydro	carbons							
06609	TPH-DRO CA C10-C28		n.a.	62	J	50	100	1
Metal	S	SW-846	6010B	mg/l		mg/l	mg/l	
07058	Manganese		7439-96-5	0.0033	J	0.0018	0.0050	1
		SW-846	6010B	ug/l		ug/l	ug/l	
01743	Aluminum		7429-90-5	N.D.		86.8	200	1
07046	Barium		7440-39-3	61.6		1.1	5.0	1
08014	Boron		7440-42-8	1,020		8.3	50.0	1
07049	Cadmium		7440-43-9	N.D.		0.49	5.0	1
01750	Calcium		7440-70-2	59,700		38.2	200	1
07051	Chromium		7440-47-3	N.D.		1.8	15.0	1
07053	Copper		7440-50-8	N.D.		4.1	10.0	1
01754	Iron		7439-89-6	N.D.		74.7	200	1
07055	Lead		7439-92-1	N.D.		6.2	15.0	1
01757	Magnesium		7439-95-4	24,800		19.0	100	1
07060	Molybdenum		7439-98-7	N.D.		1.7	10.0	1
07061	Nickel		7440-02-0	N.D.		2.8	10.0	1
10143	Phosphorus		7723-14-0	30.1	J	10.0	100	1
01765	Silicon		7440-21-3	15,200		19.2	50.0	1
07066	Silver		7440-22-4	N.D.		1.9	5.0	1
01767	Sodium		7440-23-5	74,400		173	1,000	1
12004	Sulfur		7704-34-9	14,000		83.3	500	1
07069	Tin		7440-31-5	N.D.		7.1	20.0	1
07070	Titanium		7440-32-6	3.1	J	1.3	10.0	1
07071	Vanadium		7440-62-2	26.6		1.6	5.0	1
07072	Zinc		7440-66-6	N.D.		5.4	20.0	1
Wet C	hemistry	EPA 166	54A	ug/l		ug/l	ug/l	
00612	SGT-HEM (TPH)		n.a.	N.D.		1,400	5,000	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

	Laboratory Sample Analysis Record							
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor	
10335	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W171451AA	05/25/2017 18:02	Linda C Pape	1	
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W171451AA	05/25/2017 18:02	Linda C Pape	1	

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	Laboratory Sample Analysis Record							
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
14249	PAHs 8270C Water	SW-846 8270C	1	17137WAL026	05/18/2017	10:18	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	17137WAL026	05/17/2017	21:10	Christine Gleim	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17142B20A	05/23/2017	05:33	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17142B20A	05/23/2017	05:33	Jeremy C Giffin	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	171370017A	05/18/2017	18:22	Thomas C Wildermuth	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	171370017A	05/17/2017	18:00	Ryan J Dowdy	1
01743	Aluminum	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07046	Barium	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
08014	Boron	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07049	Cadmium	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
01750	Calcium	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07051	Chromium	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07053	Copper	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
01754	Iron	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07055	Lead	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
01757	Magnesium	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07058	Manganese	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07060	Molybdenum	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07061	Nickel	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
10143	Phosphorus	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
01765	Silicon	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07066	Silver	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
01767	Sodium	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
12004	Sulfur	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07069		SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07070	Titanium	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07071	Vanadium	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
07072	Zinc	SW-846 6010B	1	171370184802	05/18/2017	13:14	Scott R Yanos	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	171370184802	05/18/2017	00:55	Denise L Trimby	1
00612	SGT-HEM (TPH)	EPA 1664A	1	17138807801A	05/18/2017	10:39	Yolunder Y Bunch	1

^{*=}This limit was used in the evaluation of the final result



Analysis Report

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Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

ug/1 ug/1 ug/1 Batch number: W171451AA Sample number(s): 8995363-899536 Acetone N.D. 6 20 t-Amyl methyl ether N.D. 0.5 1	5
Acetone N.D. 6 20	5
t-Amyl methyl ether N.D. 0.5 1	
Benzene N.D. 0.5 1	
Bromobenzene N.D. 1 5	
Bromochloromethane N.D. 1 5	
Bromodichloromethane N.D. 0.5 1	
Bromoform N.D. 0.5 4	
Bromomethane N.D. 0.5 1	
2-Butanone N.D. 3 10	
t-Butyl alcohol N.D. 5 20	
n-Butylbenzene N.D. 1 5	
sec-Butylbenzene N.D. 1 5	
tert-Butylbenzene N.D. 1 5	
Carbon Disulfide N.D. 1 5	
Carbon Tetrachloride N.D. 0.5 1	
Chlorobenzene N.D. 0.5 1	
Chloroethane N.D. 0.5 1	
2-Chloroethyl Vinyl Ether N.D. 2 10	
Chloroform N.D. 0.5 1	
Chloromethane N.D. 0.5 1	
2-Chlorotoluene N.D. 1 5	
4-Chlorotoluene N.D. 1 5	
1,2-Dibromo-3-chloropropane N.D. 2 5	
Dibromochloromethane N.D. 0.5 1	
1,2-Dibromoethane N.D. 0.5 1	
Dibromomethane N.D. 0.5 1	
1,2-Dichlorobenzene N.D. 1 5	
1,3-Dichlorobenzene N.D. 1 5	
1,4-Dichlorobenzene N.D. 1 5	
Dichlorodifluoromethane N.D. 0.5 1	
1,1-Dichloroethane N.D. 0.5 1	
1,2-Dichloroethane N.D. 0.5 1	
1,1-Dichloroethene N.D. 0.5 1	
cis-1,2-Dichloroethene N.D. 0.5 1	
trans-1,2-Dichloroethene N.D. 0.5 1	
1,2-Dichloropropane N.D. 0.5 1	
1,3-Dichloropropane N.D. 0.5 1	
2,2-Dichloropropane N.D. 0.5 1	
1,1-Dichloropropene N.D. 1 5	
cis-1,3-Dichloropropene N.D. 0.5 1	

^{*-} Outside of specification

^{**-}This limit was used in the evaluation of the final result for the blank

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.



Analysis Report

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Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

Method Blank (continued)

Analysis Name	Result		MDL*	*	LOQ	
	ug/l		ug/l	L	ug/l	
trans-1,3-Dichloropropene	N.D.		0.5		1	
Ethanol	N.D.		50		250	
Ethyl t-butyl ether	N.D.		0.5		1	
Ethylbenzene	N.D.		0.5		1	
Freon 113	N.D.		2		10	
Hexachlorobutadiene	N.D.		2		5	
2-Hexanone	N.D.		3		10	
di-Isopropyl ether	N.D.		0.5		1	
Isopropylbenzene	N.D.		1		5	
p-Isopropyltoluene	N.D.		1		5	
Methyl Tertiary Butyl Ether	N.D.		0.5		1	
4-Methyl-2-pentanone	N.D.		3		10	
Methylene Chloride	N.D.		2		4	
Naphthalene	N.D.		1		5	
n-Propylbenzene	N.D.		1		5	
Styrene	N.D.		1		5	
1,1,1,2-Tetrachloroethane	N.D.		0.5		1	
1,1,2,2-Tetrachloroethane	N.D.		0.5		1	
Tetrachloroethene	N.D.		0.5		1	
Toluene	N.D.		0.5		1	
1,2,3-Trichlorobenzene	N.D.		1		5	
1,2,4-Trichlorobenzene	N.D.		1		5	
1,1,1-Trichloroethane	N.D.		0.5		1	
1,1,2-Trichloroethane	N.D.		0.5		1	
Trichloroethene	N.D.		0.5		1	
Trichlorofluoromethane	N.D.		0.5		1	
1,2,3-Trichloropropane	N.D.		1		5	
1,2,4-Trimethylbenzene	N.D.		1		5	
1,3,5-Trimethylbenzene	N.D.		1		5	
Vinyl Chloride	N.D.		0.5		1	
m+p-Xylene	N.D.		0.5		1	
o-Xylene	N.D.		0.5		1	
Batch number: Z171382AA	Sample	number	(s):	899536	52	
Benzene	N.D.		0.5		1	
Ethylbenzene	N.D.		0.5		1	
Methyl Tertiary Butyl Ether	N.D.		0.5		1	
Toluene	N.D.		0.5		1	
Xylene (Total)	N.D.		0.5		1	
Batch number: 17137WAL026	Sample	number	(s):	899536	3-8995365	
Acenaphthene	N.D.		0.1		0.5	
Acenaphthylene	N.D.		0.1		0.5	
Anthracene	N.D.		0.1		0.5	
Benzo(a) anthracene	N.D.		0.1		0.5	
Benzo(a)pyrene	N.D.		0.1		0.5	
Benzo(b) fluoranthene	N.D.		0.1		0.5	
Benzo(g,h,i)perylene	N.D.		0.1		0.5	
Benzo(k) fluoranthene	N.D.		0.1		0.5	
Chrysene	N.D.		0.1		0.5	

^{*-} Outside of specification

^{**-}This limit was used in the evaluation of the final result for the blank

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Dibenz (a,h) anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	N.D. N.D. N.D. N.D. N.D. N.D. N.D.	0.1 0.1 0.1 0.1 0.1 0.1	0.5 0.5 0.5 0.5 0.5 0.5
Batch number: 17142B20A TPH-GRO N. CA water C6-C12	Sample number N.D.	(s): 89953 50	62-8995365 100
Batch number: 171370017A TPH-DRO CA C10-C28	Sample number N.D.	(s): 89953	63-8995365 100
	mg/l	mg/l	mg/l
Batch number: 171370184802 Manganese	Sample number N.D. ug/l	(s): 89953 0.0018 ug/l	63-8995365 0.0050 ug/l
Aluminum Barium Boron Cadmium Calcium Chromium Copper Iron Lead Magnesium Molybdenum Nickel Phosphorus Silicon Silver Sodium Sulfur Tin Titanium Vanadium Zinc	N.D. N.D. N.D. N.D. N.D. N.D. N.D. N.D.	86.8 1.1 8.3 0.49 38.2 1.8 4.1 74.7 6.2 19.0 1.7 2.8 10.0 19.2 1.9 173 83.3 7.1 1.3 1.6 5.4	200 5.0 50.0 50.0 200 15.0 10.0 200 15.0 10.0 10.0 10.0 10.0 10.0 50.0 5.0 1,000 500 20.0 10.0 20.0
Batch number: 17138807801A SGT-HEM (TPH)	Sample number N.D.		

LCS/LCSD

Analysis Name	LCS Spike	LCS	LCSD Spike	LCSD	LCS	LCSD	LCS/LCSD	RPD	RPD
	Added	Conc	Added	Conc	%REC	%REC	Limits		Max

^{*-} Outside of specification

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⁽²⁾ The unspiked result was more than four times the spike added.



Analysis Report

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Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W171451AA	Sample number	<u> </u>	5.	3,					
Acetone	150	137.71	150	135.77	92	91	50-168	1	30
t-Amyl methyl ether	20	18.85	20	16.65	94	83	67-120	12	30
Benzene	20	20.46	20	18.75	102	94	78-120	9	30
Bromobenzene	20	20.40	20	19.01	102	95	80-120	1.0	30
Bromochloromethane	20	22.86	20	20.75	114	104	80-125	10	30
Bromodichloromethane	20	20.3	20	18.75	102	94	80-120	8	30
Bromoform	20	21.5	20	19.06	108	95	64-120	12	30
Bromomethane	20	24.3	20	23.28	121	116	49-121	4	30
2-Butanone	150	151.96	150	131.31	101	88	53-140	15	30
t-Butyl alcohol	200	173.57	200	166.89	87	83	68-122	4	30
n-Butylbenzene	20	18.5	20	16.57	92	83	76-120	11	30
sec-Butylbenzene	20	19	20	17.33	95	87	77-120	9	30
tert-Butylbenzene	20	19.63	20	17.13	98	86	78-120	14	30
Carbon Disulfide	20	21.62	20	18.87	108	94	63-122	14	30
Carbon Tetrachloride	20	21.81	20	19.74	109	99	76-123	10	30
Chlorobenzene	20	20.55	20	18.67	103	93	80-120	10	30
Chloroethane	20	21.32	20	20.51	107	1.03	51-121	4	30
2-Chloroethyl Vinyl Ether	20	17.99	20	16.45	90	82	55-121	9	3.0
Chloroform	20	19.99	20	18.47	100	92	80-120	8	3.0
Chloromethane	20	19.53	20	18.26	98	91	57-120	7	30
2-Chlorotoluene	20	19.95	20	17.76	100	89	80-120	12	30
4-Chlorotoluene	20	20.06	20	18.38	100	92	80-120	9	30
1,2-Dibromo-3-chloropropane	20	20.97	20	18.48	105	92	59-120	13	30
Dibromochloromethane	20	19.68	20	18.32	98	92	78-120	7	30
1,2-Dibromoethane	20	21.53	20	19.26	108	96	75-120	11	30
Dibromomethane	20	21.25	20	19.54	106	98	80-120	8	30
1,2-Dichlorobenzene	20	20.53	20	18.64	103	93	80-120	10	30
1,3-Dichlorobenzene	20	19.78	20	18	99	90	80-120	9	30
1,4-Dichlorobenzene	20	20.33	20	18.65	102	93	80-120	9	30
Dichlorodifluoromethane	20	18.78	20	16.17	94	81	54-122	15	30
1,1-Dichloroethane	20	20.39	20	18.98	102	95	80-120	7	30
1,2-Dichloroethane	20	20.53	20	18.34	103	92	66-128	11	30
1,1-Dichloroethene	20	20.54	20	18.43	103	92	76-124	11	30
cis-1,2-Dichloroethene	20	21.51	20	20.01	108	100	80-120	7	30
trans-1,2-Dichloroethene	20	21.77	20	19.84	109	99	80-120	9	30
1,2-Dichloropropane	20	20.51	20	19.02	103	95	80-120	8	30
1,3-Dichloropropane	20	19.78	20	17.64	99	88	80-120	11	30
2,2-Dichloropropane	20	22.33	20	20.4	112	102	66-128	9	30
1,1-Dichloropropene	20	20.04	20	17.87	100	89	78-120	11	30
cis-1,3-Dichloropropene	20	19.96	20	18.28	100	91	75-120	9	30
trans-1,3-Dichloropropene	20	19.56	20	17.03	98	85	76-120	14	30
Ethanol	500	429.97	500	496.63	86	99	35-165	14	30
Ethyl t-butyl ether	20	18.29	20	16.58	91	83	69-120	10	30
Ethylbenzene	20	19.47	20	17.49	97	87	78-120	11	30
Freon 113	20	22.52	20	19.32	113	97	68-129	15	30
Hexachlorobutadiene	20	22.05	20	19.38	110	97	60-120	13	30
2-Hexanone	100	107.77	100	84.25	108	84	49-137	24	30

^{*-} Outside of specification

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Analysis Report

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Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
di-Isopropyl ether	20	19.81	20	17.99	99	90	70-124	10	30
Isopropylbenzene	20	18.94	20	17.01	95	85	80-120	11	30
p-Isopropyltoluene	20	19.06	20	17.06	95	85	76-120	11	30
Methyl Tertiary Butyl Ether	20	19.55	20	17.26	98	86	75-120	12	30
4-Methyl-2-pentanone	100	103.68	100	91.95	104	92	56-131	12	30
Methylene Chloride	20	20.73	20	19.22	104	96	80-120	8	30
Naphthalene	20	19.02	20	16.75	95	84	59-120	13	30
n-Propylbenzene	20	19.01	20	17.12	95	86	79-121	10	30
Styrene	20	19.78	20	17.64	99	88	80-120	11	30
1,1,1,2-Tetrachloroethane	20	21.31	20	19.45	107	97	80-120	9	30
1,1,2,2-Tetrachloroethane	20	21.27	20	19.13	106	96	72-120	11	30
Tetrachloroethene	20	21.85	20	19.75	109	99	80-129	10	30
Toluene	20	20.41	20	18.28	102	91	80-120	11	30
1,2,3-Trichlorobenzene	20	21.32	20	18.46	107	92	51-120	14	30
1,2,4-Trichlorobenzene	20	19.63	20	17.28	98	86	58-120	13	30
1,1,1-Trichloroethane	20	23.31	20	21.9	117	110	67-120	6	30
1,1,2-Trichloroethane	20	21.47	20	19.53	107	98	80-120	9	30
Trichloroethene	20	20.34	20	18.93	102	95	80-120	7	30
Trichlorofluoromethane	20	22.48	20	20.66	112	103	57-134	8	30
1,2,3-Trichloropropane	20	21.65	20	19.51	108	98	80-120	10	30
1,2,4-Trimethylbenzene	20	18.78	20	16.93	94	85	75-120	10	30
1,3,5-Trimethylbenzene	20	18.74	20	17.01	94	85	75-120	10	30
Vinyl Chloride	20	20.36	20	18.4	102	92	63-121	10	30
m+p-Xylene	40	40.91	40	36.84	102	92	80-120	10	30
o-Xylene	20	19.37	20	17.39	97	87	80-120	11	30
Batch number: Z171382AA	Sample numbe	er(s): 89953	362						
Benzene	20	18.78			94		78-120		
Ethylbenzene	20	18.67			93		78-120		
Methyl Tertiary Butyl Ether	20	19.28			96		75-120		
Toluene	20	19.59			98		80-120		
Xylene (Total)	60	58.24			97		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 17137WAL026	Sample numbe	er(s): 89953	863-8995365						
Acenaphthene	50	36.64	50	40.61	73	81	64-121	10	30
Acenaphthylene	50	37.66	50	41.44	75	83	63-120	10	3.0
Anthracene	50	39.46	50	42.72	79	85	72-120	8	30
Benzo(a)anthracene	50	42.33	50	43.44	85	87	74-124	3	30
Benzo(a) pyrene	50	37.76	50	38.6	76	77	71-119	2	30
Benzo(b) fluoranthene	50	39.12	50	40.63	78	81	72-124	4	3.0
Benzo(q,h,i)perylene	50	36.58	50	37.03	73	74	61-124	1	30
Benzo(k) fluoranthene	50	41	50	42.96	82	86	73-121	5	30
Chrysene	50	42.88	50	43.82	86	88	75-129	2	30
Dibenz(a,h)anthracene	50	37.45	50	37.44	75	75	65-126	0	30
Fluoranthene	50	42.76	50	45.77	86	92	74-126	7	30
Fluorene	50	38.74	50	42.01	77	84	67-120	8	30
Indeno(1,2,3-cd)pyrene	50	36	50	36.88	72	74	63-122	2	30

^{*-} Outside of specification

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Analysis Report

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Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

LCS/LCSD	(continued)
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Analysis Name	LCS Spike Added ug/1	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Naphthalene	50	32.86	50	36	66	72	54-109	9	30
Phenanthrene	50	39.04	50	42.44	78	85	72-117	8	30
Pyrene	50	39.64	50	41.45	79	83	69-119	4	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 17142B20A	Sample number	r(s): 89953	862-8995365						
TPH-GRO N. CA water C6-C12	1100	1048.74	1100	1085.67	95	99	80-120	3	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 171370017A	Sample number	r(s): 89953	363-8995365						
TPH-DRO CA C10-C28	1600	1410.39	1600	1410.79	88	88	53-115	0	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 171370184802	Sample number	r(s): 89953	363-8995365						
Manganese	0.500	0.513			103		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 171370184802	Sample number	r(s): 89953	363-8995365						
Aluminum	2000	2168.07			108		80-120		
Barium	2000	2020.12			101		80-120		
Boron	2000	1937.14			97		80-120		
Cadmium	50	51.69			103		80-120		
Calcium	4000	4086.98			102		80-120		
Chromium	200	197.38			99		80-120		
Copper	250	257.85			103		80-120		
Iron	1000	1036.08			104		80-120		
Lead	150	154.63			103		80-120		
Magnesium	2000	2079.6			104		80-120		
Molybdenum	2000	2025.93			101		80-120		
Nickel	500	526.52			105		80-120		
Phosphorus	1000	1013.65			101		80-120		
Silicon	1000	1093.51			109		80-120		
Silver	50	50.18			100		80-120		
Sodium	10000	10297.08			103		80-120		
Sulfur	1000	1065.16			107		80-120		
Tin	4000	3935.52			98		80-120		
Titanium	1000	980.06			98		80-120		
Vanadium	500	492.17			98		80-120		
Zinc	500	507.22			101		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 17138807801A	Sample number	r(s): 89953	863-8995365						
SGT-HEM (TPH)	20000	14900	20000	14200	75	71	64-132	5	23

^{*-} Outside of specification

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Analysis Report

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Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: Z171382AA	Sample numb	er(s): 899	95362 UNSPI	K: P991434						
Benzene	N.D.	20	19.86	20	20.36	99	102	78-120	2	30
Ethylbenzene	N.D.	20	19.71	20	19.97	99	100	78-120	1	30
Methyl Tertiary Butyl Ether	N.D.	20	19.05	20	19.66	95	98	75-120	3	30
Toluene	N.D.	20	20.75	20	21.02	104	105	80-120	1	30
Xylene (Total)	N.D.	60	61.44	60	62.25	102	104	80-120	1	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 171370184802	Sample numb	er(s): 899	95363-89953	365 UNSPK:	8995363					
Manganese	0.136	0.500	0.656	0.500	0.634	104	100	75-125	3	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 171370184802	Sample numb	er(s): 899	95363-89953	365 UNSPK:	8995363					
Aluminum	N.D.	2000	2178.24	2000	2180.73	109	109	75-125	0	20
Barium	62.31	2000	2128.89	2000	2054.35	103	100	75-125	4	20
Boron	1065.62	2000	3123.58	2000	3046.96	103	99	75-125	2	20
Cadmium	N.D.	50	51.28	50	50.57	103	101	75-125	1	20
Calcium	55299.93	4000	60001.43	4000	59590.22	118 (2)	107 (2)	75-125	1	20
Chromium	N.D.	200	199.37	200	193.22	100	97	75-125	3	20
Copper	N.D.	250	265.46	250	257.55	106	103	75-125	3	20
Iron	N.D.	1000	1059.78	1000	1044.93	106	104	75-125	1	20
Lead	N.D.	150	149.24	150	149.01	99	99	75-125	0	20
Magnesium	23603.67	2000	25853.22	2000	25727.18	112 (2)	106 (2)	75-125	0	20
Molybdenum	N.D.	2000	2034.39	2000	2042.92	102	102	75-125	0	20
Nickel	2.83	500	519.98	500	511.23	103	102	75-125	2	20
Phosphorus	27.81	1000	1079.87	1000	1056.7	105	103	75-125	2	20
Silicon	16639.79	1000	17869.8	1000	17752.71	123 (2)	111 (2)	75-125	1	20
Silver	N.D.	50	50.33	50	49.74	101	99	75-125	1	20
Sodium	105153.52	10000	116533.99	10000	115686.04	114 (2)	105 (2)	75-125	1	20
Sulfur	10847.6	1000	11998.52	1000	11931.26	115 (2)	108 (2)	75-125	1	20
Tin	N.D.	4000	3932.74	4000	3948.26	98	99	75-125	0	20
Titanium	2.99	1000	993.72	1000	988.13	99	99	75-125	1	20
Vanadium	23.81	500	530.76	500	513.71	101	98	75-125	3	20
Zinc	N.D.	500	512.9	500	506.49	103	101	75-125	1	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 17138807801A	Sample numb	er(s): 899	95363-89953	365 UNSPK:	P992438					
SGT-HEM (TPH)	N.D.	21100	13894.8			66		64-132		

^{*-} Outside of specification

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Analysis Report

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Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/1	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 171370184802 Manganese	5.	8995363-8995365 BKG: 0.141	8995363 4	20
	ug/l	ug/l		
Batch number: 171370184802 Aluminum Barium Boron Cadmium Calcium Chromium Copper Iron	N.D. 62.31 1065.62 N.D. 55299.93 N.D. N.D. N.D.	8995363-8995365 BKG: N.D. 65.44 1107.11 N.D. 55484.9 N.D. N.D. N.D.	0 (1) 5 4 0 (1) 0 0 (1) 0 (1) 0 (1)	20 20 20 20 20 20 20 20 20
Lead Magnesium Molybdenum Nickel Phosphorus Silicon Silver	N.D. 23603.67 N.D. 2.83 27.81 16639.79	N.D. 23672.03 N.D. 3.30 28.96 16670.79	0 (1) 0 (1) 15 (1) 4 (1) 0 (1)	20 20 20 20 20 20 20
Silver Sodium Sulfur Tin Titanium Vanadium Zinc	N.D. 105153.52 10847.6 N.D. 2.99 23.81 N.D.	N.D. 105651.85 10948.74 N.D. 2.97 24.16 N.D.	0 (1) 0 1 0 (1) 1 (1) 1 (1) 0 (1)	20 20 20 20 20 20 20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260 Full List $\mbox{w/ Sep.}$ Xylenes Batch number: W171451AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8995363	103	101	94	84
8995364	105	105	94	85
8995365	105	105	93	85
Blank	103	104	94	85
LCS	101	101	98	94
LCSD	102	100	97	94
Limits:	80-116	77-113	80-113	78-113

^{*-} Outside of specification

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Analysis Report

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Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE Batch number: Z171382AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8995362	99	100	99	95
Blank	99	101	99	94
LCS	96	100	100	98
MS	97	99	99	98
MSD	96	100	99	97
Limits	80-116	77-113	80-113	78-113

Analysis Name: PAHs 8270C Water

Batch number: 17137WAL026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	
8995363	67	68	53	
8995364	83	77	52	
8995365	78	72	56	
Blank	64	65	65	
LCS	75	70	65	
LCSD	82	76	65	
Limits:	29-119	41-112	38-125	

Analysis Name: TPH-GRO N. CA water C6-C12

Batch number: 17142B20A

	Trifluorotoluene-F
8995362	90
8995363	97
8995364	85
8995365	87
Blank	91
LCS	94
LCSD	98

Limits: 63-135

Analysis Name: TPH-DRO CA C10-C28

Batch number: 171370017A

	Orthoterphenyl	
8995363	89	
8995364	92	
8995365	103	
Blank	83	
LCS	105	
LCSD	106	
Limits	50-124	

^{*-} Outside of specification

^{**-}This limit was used in the evaluation of the final result for the blank

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Quality Control Summary

Client Name: GHD Group Number: 1801815

Reported: 05/26/2017 13:02

^{*-} Outside of specification

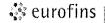
^{**-}This limit was used in the evaluation of the final result for the blank

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.

Chevron California Region Analysis Request/Chain of Custody

🔅 eurofins	Lancaster Labor	atories		Acct () 5 1	.#]	35.	34		For I	Eurof	fins La	anças 501	ter La	aborat	tories Sa	Envir	onme	ental 94	use o	nly Coo)-(2	05			
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Facility# SS#373378-OML	. G-R#171559	05 Glob	oäl id#T	1000000)3434	•		ĺ												3					
Sile Address 7600 MACARTH	UR BLVD., OA	KLAND,	, CA				I I	X						⊠ dr					^ي رة م) L				Results in Dry W	=
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Consultant Project Mgr. Deanna L. Hardi	ng, deanna@g	rinc.con	n								Cont	<u>۲</u>	8015📉	out Silica	Silica	3	တ္သ	Metho	必信な へ Method	A56	(0)	17 N		☐ Confirm highest h ☐ Confirm all hits by	
Consultant Phone # (925) 551-7444)	(180					gy ki gasi kanasaninin		Potable	NPDES	Air	oer of	8021	08	15 with	15 with	ว	Oxygenates		3 ■	606.05E	(0128)	HA6		Run oxy':	
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	MW-2			1152	X						15		X	X		X			X	X	X	X		B, Cd, Ca, C Pb, Mg, Mo,	
	MW-3		4	1055	X			4	,		15		X	X		X			\langle	X	X	X		Si, Ag, Na, S	i, Sn, Ti, V
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Sample Administration Receipt Documentation Log

Doc Log ID: 183781

Client: CA OFFICE

Delivery and Receipt Information

Delivery Method:

BASC

Arrival Timestamp:

05/16/2017 9:32

Number of Packages:

2

Number of Projects:

4

State/Province of Origin:

<u>CA</u>

Arrival Condition Summary

Shipping Container Sealed:

Yes

Sample IDs on COC match Containers:

Yes

Custody Seal Present:

Yes

Sample Date/Times match COC:

Yes

Custody Seal Intact:

Yes

VOA Vial Headspace ≥ 6mm:

Air Quality Samples Present:

No

No

Samples Chilled:

Yes

Total Trip Blank Qty:

2

Paperwork Enclosed:

Yes

Trip Blank Type:

HCL

Samples Intact: Missing Samples: Yes

No

Extra Samples:

Discrepancy in Container Qty on COC:

No

No

Unpacked by Evelyn Shank (12390) at 13:02 on 05/16/2017

Samples Chilled Details

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler#	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	2.0	DT	Wet	Υ	Bagged	N
2	DT121	1.0	DT	Wet	Υ	Bagged	N



Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL Below Minimum Quantitation Level mq milligram(s) degrees Celsius mĹ milliliter(s) cfu colony forming units MPN Most Probable Number **CP Units** cobalt-chloroplatinate units N.D. none detected F degrees Fahrenheit ng nanogram(s) nephelometric turbidity units gram(s) NTU g IÚ International Units pg/L picogram/liter kilogram(s) RLReporting Limit kg **TNTC** liter(s) Too Numerous To Count lb. pound(s) microgram(s) μg μĹ microliter(s) m3 cubic meter(s) milliequivalents umhos/cm micromhos/cm meg

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

Laboratory Data Qualifiers:

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

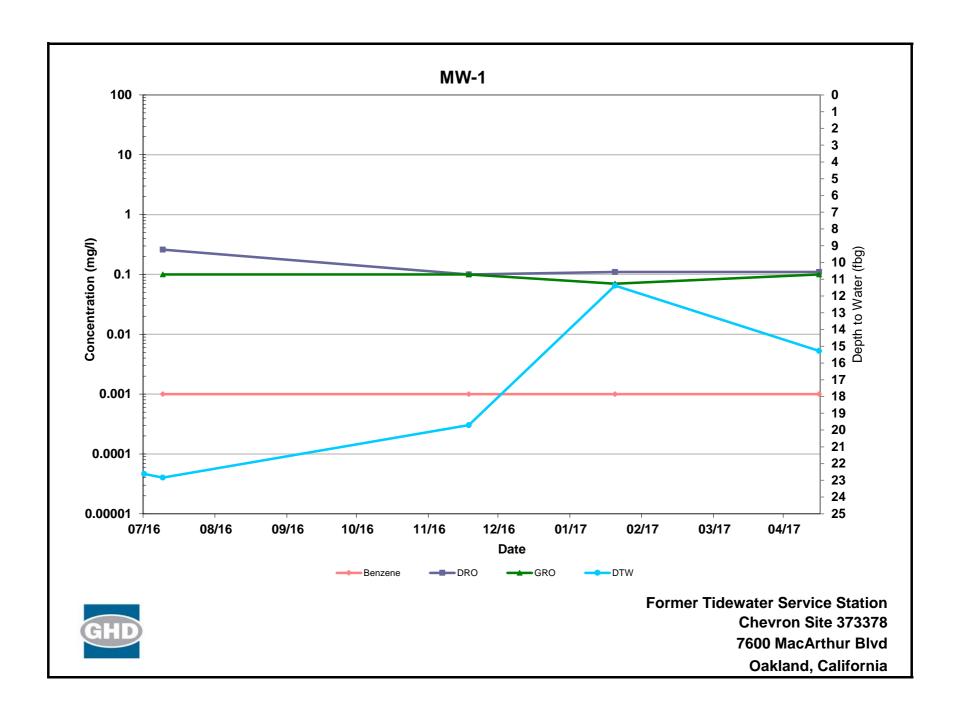
Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

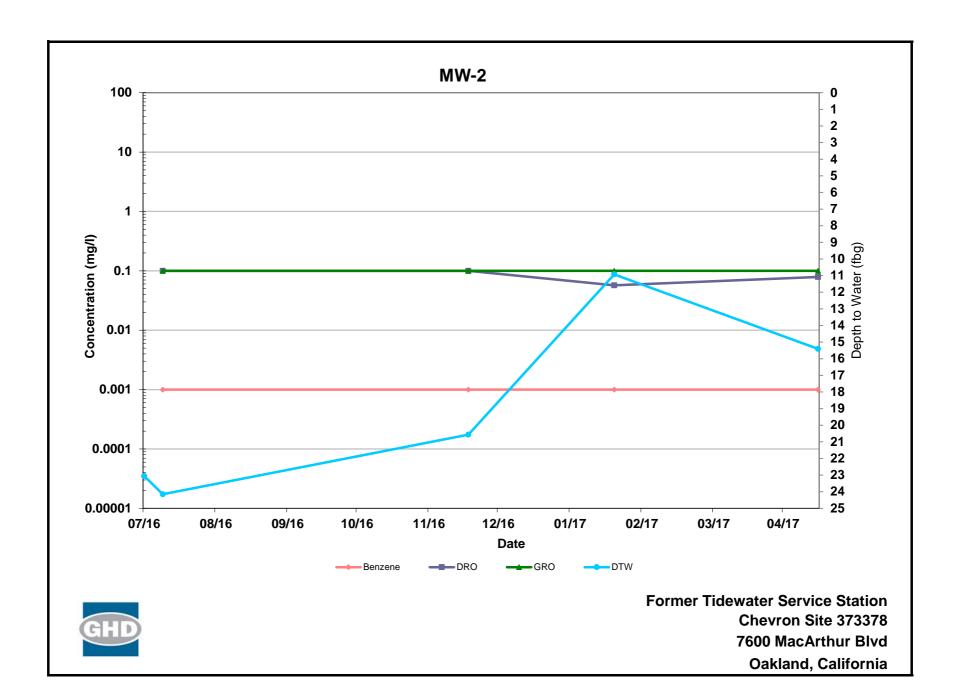
This report shall not be reproduced except in full, without the written approval of the laboratory.

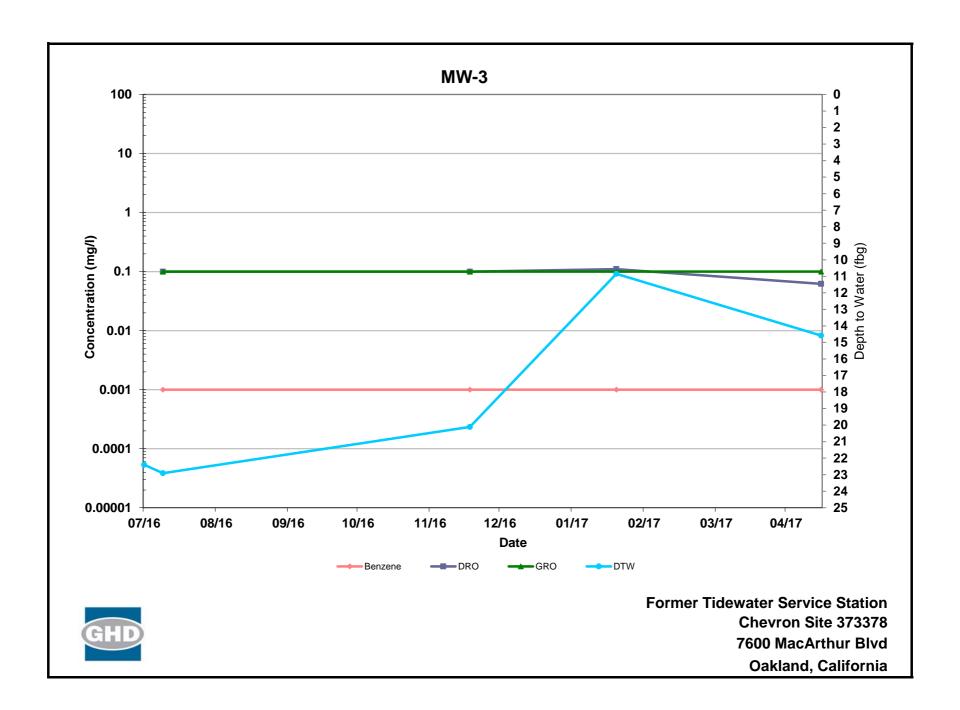
Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Attachment D Groundwater Elevation and Concentration Graphs









Tidewater Purge Log Worksheet

Tracking #:

04-07-2017 Shipment

Non-Hazardous Water Transport Form

Profile No.: 500-1963

Date of Shipment Pick-up: 4/7/2017 **PO/SO #**: W170816216 / 1701619946

BOL #: 0039872

1963-040717

Texaco Downstream Properties Inc.

	TIDEWATER SITE INFORMATION										
Manifest Doc No.	SAMPLE DATE (Shipment Date)	SITE NUMBER (Generator)	CITY	SITE ADDRESS	VOLUME						
Α	12/15/2016	373378	OAKLAND	7600 MACARTHUR BLVD.	25						
В	1/4/2017	211717	SACRAMENTO	66 BROADWAY STREET	150						
С	1/6/2017	307996 🗸	AUBURN	203 PLEASANT AVENUE	139						
D	1/9/2017	307515	RED BLUFF	545 SOUTH MAIN STREET	125						
E	2/16/2017	373378	OAKLAND	7600 MACARTHUR BLVD.	35						
F	3/6/2017	372359	UKIAH	195 BRUSH STREET	26						

Note: The TW steel tank holds up to 500 gallons; the lock combo: 3910.

G-R Total Qty:

500

Clean Harbors Qty:

500

BOLDD 39872 TRACKING # 1963 - D4 07 2017



Seaport Environmental

	NON-HAZARDOUS	WATER TRAN	SPORT FORM	
GENERATOR INFORM	IATION		CUSTOMER INFO	RMATION
Texaco Downstream	Prop.		Clean Harbors E	nvironmental
6805 Sierra Ct.	·		781-792-5000	
Dublin Ca			PO# W170	816216
			So# 17016	
NON-HAZARDOUS WASTI DESCRIBED WATER. THIS IS A LIQUID EXEMPT FRO DESCRIBED IN 22 CCR A	Purging of Groundwater Mic E WATER, MONITORING WELL S WATER MAY CONTAIN DISSO OM RCRA PER 40 CFR 261.4 (b) RTICLE 11 OR ANY OTHER APP SED AND IS IN PROPER CONDIT	PURGE WATER AND/ LVED HYDROCARBON (10)AND DOES NOT M LICABLE STATE LAW TION FOR TRANSPOR	OR AUGER RINSATE, TANI NS. I CERTIFY THAT THE AI IEET THE CRITERIA OF HA I HAS BEEN PROPERLY DE	K RINSATE OR ABOVE BOVE NAMED MATERIAL ZARDOUS WASTE AS ESCRIBED.
SITE INFORMATION				
6805 Sierra Ct.			GROSS	
Dublin			TARE	
Ca			NET	
			TOTAL GALLONS Calculated at 8.34lbs per USG	HE 500
TRANSPORTER INFOR	MATION	·		
		Truck ID: B	74	
Clean Harbors) 7	
		Driver: 16NA	UD KIR(
		Print full name & sign	date	
			TIME OUT	
			TIME IN	
			TIME SPENT	
DISPOSAL FACILITY INFO	ORMATION EPAID: CAR 0002	39673		
Seaport Environme	ntol An	proval Number	Solids %Wt	рН
679 Seaport Boulevar	•	proval Number	CONGS 7,000	pi:
Redwood City, Ca 940		500 - 1963		
Phone: (650) 364 1024	_			
(000) 004 102	-			
			Solids Surcharge	
			¢/USG	
				20
Received by:				

Site Address:

6905 Sierra Court Suite G Dublin,CA 94566

SC PPW 1/4/2017

WORK ORDER NO. 1701619946

	L OF LADING	STRAIGHT BIL	872	o. 0039	DOCUMENT NO
D#	se, inc. VEHICLE II	ors Environmental Servic	Clean Harb	R1	TRANSPORTER
PHONE (781) 792-5000	TRANS. 1 I	322250	MAD039		EPA ID#
O #	VEHICLE II			32	TRANSPORTER
PHONE	TRANS. 2 I				EPA ID#
ierties	SHIPPER Texaco Downstream Prop		ntal i.l.C	FACILITY at Environme	DESIGNATED Seapo
	SHIPPER EPA ID #		9 2	ID# 004224	FACILITY EPA
Gi	ADDRESS ierra Court, Suite		rard	e aport Boules	ADDRESS 99 S
STATE ZIP94568	CITY	ZIP94063	STA	ood City	CITY Redwi
TOTAL UNIT QUANTITY WT/VOL	ON OF MATERIALS	DESCRIPTIO	нм	TYPE	CONTAINERS NO. & SIZE
destinance	J.D. F. REGULATED, (PURGE VOTER)	NON HAZARDOUS, NON I	A.	TT	1
			B.		
			C.		
			D.		
			E.		
			F.		<u> </u>
			G.		
			H.		
500 - 1963	SEAPORT Profile	EMERICANOV PHONE	RUCTIONS	LING INSTE	SPEÇIAL HANC
roperly cl		: This is to certify that t	G. H. RUCTIONS	PERS CERT	SHIP

described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SHIPPER PRINT DESIREE Walton	SIGN	DATE
PRINT TRANSPORTER 1 / AV A (/ C / K / C / C / C / C / C / C / C / C	SIGN 14 June 16 July	DATE
PRINT	SIGN	DATE
TRANSPORTER 2		
PRINT	SIGN	DATE
RECEIVED BY		

Shipment List

Manifest Tracking/Doc No.	Starts With	Y	%1963-040717	Search	Advanced

					<u> </u>	
			Displaying	1 - 6 of 6 re	ecords.	
Shipment No.	Manifest Tracking/Doc No.	Manifest State Number	Shipment Date	Status	Generator	Disposal Facility
373378- 0000005	1963-040717A	1963-040717A	12/15/2016	Shipped	Tidewater 373378	Seaport Refining and Environmental, LLC (Redwood City)
211717- 0000056	1963-040717B	1963-040717B	1/4/2017	Shipped	Texaco Downstream Properties Inc. 211717	Seaport Refining and Environmental, LLC (Redwood City)
307996- 0000058	1963-040717C	1963-040717C	1/6/2017	Shipped	Texaco Downstream Properties Inc. 307996	Seaport Refining and Environmental, LLC (Redwood City)
307515- 0000074	1963-040717D	1963-040717D	1/9/2017	Shipped	Texaco Downstream Properties Inc. 307515	Seaport Refining and Environmental, LLC (Redwood City)
373378- 0000007	1963-040717E	1963-040717E	2/16/2017	Shipped	Tidewater 373378	Seaport Refining and Environmental, LLC (Redwood City)
372359- 0000024	1963-040717F	1963-040717F	3/6/2017	Shipped	Former Tidewater 372359	Seaport Refining and Environmental, LLC (Redwood City)

ļ										
ľ	NON-HAZARDOUS	Generator ID Number		3. Emergency Resp	onse Phone		racking Nun			
l	WASTE MANIFEST		1				1963-0	40717E		
	5. Generator's Name and Ma Tidewater 373	ailing Address 3378		Generator's Site Add	ress (if different	than mailing	address)			
l	PO Box 6004 -	Chevron EMC Waste Desk			cArthur					
	San Ramon, CA	N 94583 7 386-6044		Oakland	l, CA 94	1605-29	44			
l	Generator's Phone 6. Transporter 1 Company N Gettler-Ryan	Name		<u> </u>		U.S. EPA I	D. Mumber			
						0.0. El A1				
		Environmental Services Inc.,	M.			U.S. EPA I		9 3 2	2 2	5 0
	8. Designated Facility Name Seaport Refin 679 Seaport B	ing and Environmental, LLC (R	≀edwood	City)		U.S. EPA I	D Number			
Redwood City, CA 94063										<i>c</i> 0
L	Facility's Phone						ь о о	0 0 3	2 0	р 8
ľ	9. Waste Shipping Nar	me and Description		10. Contai	ners Type	11. Total Quantity	12. Unit Wt./Vol.			
ľ	1.Non Haz, N	on-DOT regulated liquid		ŀ		-				
1 2 2	1.Non Haz, N purge wa	ter)		1	TT	3 5	G			
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	3.				-					
ĺ	<u> </u>									
1	4.									
1				- 1						
١	13. Special Handling Instruction	ons and Additional Information								
I	1. Wear Level "D	" PPE, Wear Splash Protect								
١	14 GENERATOR'S/GEEEROR	'S CERTIFICATION: I hereby declare that the contents of this con								
-	packaged, marked and labeled/place	arded, and are in all respects in proper condition for transport according	ding to applicable	international and national	al governmental re	roper snipping n gulations.	ame, and are o	assified,		
	Generator's/Offeror's Printed/T	Typed Name	Signa	ature				Month	Day	Year
Ÿ										
Lil	15. International Shipments	Import to U.S.	Export from U	J.S. Port of e	entry/exit					
Z	Transporter Signature(for expo 16. Transporter Ackowledgmen			Date Le	aving U.S.:					
TER	Transporter 1 Printed/Typed Na		Signa	ture				Month	Day	Year
POR			1					I	Day I	i car
ANS	Transporter 2 Printed/Typed Na	ame	Signa	iture				Month	Day Y	'ear
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٨	17. Discrepancy									
	17a.Discrepancy Indication Spa	Ce Quantity Type		Residue	Ĺ	Partial Reje	ection		Full Reje	ection
۱				Manifest Referen	ice Number:					
IIX	17b. Alternate Facility (or Gener	rator)				U.S. EPA IC	Number			
ij					1	l				
Ä	Facility's Phone: 17c. Signature of Alternate Facili	lity (or Generator)						Month	Day	Year
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N Y										
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	 Designated Facility Owner or Printed/Typed Name 	or Operator: Certification of receipt of materials covered by	this manifest ex		17a.			Marth	Oarr	
			l Gigitati	wi w				Month	Day Y	'ear

Ļ											_
Î	NON-HAZARDOUS	1. Generator ID Number	1 *	3. Emerg	gency Respo	nse Phone	1	racking Nur			
Ш	WASTE MANIFEST		1					1963-0	40717A		
	5. Generator's Name and Ma Tidewater 373	ailing Address 3 3 7 8		Generator	r's Site Addre	ess (if differe	nt than mailing a	address)			
П	PO Box 6004 - San Ramon, CA	- Chevron EMC Waste Desk A 94583				CArthur	Blvd 94605-29	1.1			
	Generator's Phone			0,	aktanu	, CA 3	74003-29	44			
	6. Transporter 1 Company N Gettler-Ryan	lame					U.S. EPA I	D Number			
II											
	7. Transporter 2 Company N Clean Harbors	_{lame} Environmental Services Inc.	., M7				U.S. EPA I		9 3 2	2 2	5.0
	Designated Facility Name	and Site Address					U.S. EPA I				
Seaport Refining and Environmental, LLC (Redwood City) 679 Seaport Blvd.											
Redwood City, CA 94063										2 0	6 8
Facility's Phone											
9. Waste Shipping Name and Description 10. Containers 11. Total 12. Unit No. Type Quantity Wt./vol.											
ENERA	1.Non Haz, N	on-DOT regulated liquid			.,,,,						
Z	(purge wa	ter)			1	TT	2 5	G			
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II	13. Special Handling Instruction	ons and Additional Information									
II	1. Wear Level "	D" PPE, Wear Splash Protec									
H	14 GENERATOR'S/OFFEROR	S CERTIFICATION: I hereby declare that the contents of this		lli and name							
Ц	packaged, marked and labeled/plac	arded, and are in all respects in proper condition for transport acc	cording to applicable	internation	al and national	governmental	regulations	ame, and are	classined,		
$\ \ $	Generator's/Offeror's Printed/	Typed Name	Signa	ature					Month	Day	Year
7	45 Jahan ation of Chianasaha										
	15. International Shipments	Import to U.S.	Export from U	J.S.	Port of e	ntry/exit : .	 				
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AN	Transporter 2 Printed/Typed Na	ame	Signa	sture					Month	Day	Year
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H	 Discrepancy Discrepancy Indication Spa 	ice									
	тталынарансу шикакоп эрг	Quantity Type		LJR	Residue		Partial Rej	ection		Full Rej	ection
				Manif	est Referenc	e Number:					
;	17b. Alternate Facility (or Gene	rator)					U.S. EPA II	Number			
j],	facility's Phone:						1				
-	7c. Signature of Alternate Faci	lity (or Generator)							Month	Day	Year
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705								· · · · · · · · · · · · · · · · · · ·		-	
2 4											
1	8. Designated Facility Owner of	or Operator: Certification of receipt of materials covered I	hy this manifest o	vcent as a	oted in Hom	172					
4-	Printed/Typed Name	o operator. Certification of receipt of filaterials covered i	Signat		oted in item	178.			Month	Day \	Year
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