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Second Semi-Annual 2017 Groundwater Monitoring Report and Request for Closure

Chevron-branded Service Station 90504 15900 Hesperian Boulevard San Lorenzo, California



Prepared for: Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583

Prepared by: Stantec Consulting Services Inc. 1340 Treat Blvd., Suite 300 Walnut Creek, CA 94597

December 18, 2017



Mr. Mark Detterman Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

Dear Mr. Detterman:

Attached for your review is the *Second Semi-Annual 2017 Groundwater Monitoring Report and Request for Closure* for Chevron-branded service station 90504, located at 15900 Hesperian Boulevard in San Lorenzo, California. This report was prepared by Stantec Consulting Services Inc. (Stantec), upon whose assistance and advice I have relied. I have read and acknowledge the content, recommendations, and/or conclusions contained in the attached report submitted on my behalf to Alameda County Environmental Health's FTP server and the State Water Resources Control Board's GeoTracker™ Website.

If you should have any further questions, please do not hesitate to contact me or the Stantec project manager, Eva Hey, at (925) 296-2101 or eva.hey@stantec.com.

Sincerely,

Carryl MacLeod Project Manager

Campl Macheod



December 18, 2017

Attention: Mr. Mark Detterman

Alameda County Environmental Health

1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502

Reference: Second Semi-Annual 2017 Groundwater Monitoring Report and Request for Closure

Chevron-branded Service Station 90504

15900 Hesperian Boulevard, San Lorenzo, California

Dear Mr. Detterman:

On behalf of Chevron Environmental Management Company (CEMC), Stantec Consulting Services Inc. (Stantec) is pleased to submit the Second Semi-Annual 2017 Groundwater Monitoring Report and Request for Closure for Chevron-branded service station 90504, which is located at 15900 Hesperian Boulevard, San Lorenzo, Alameda County, California (Site - shown on Figure 1). This report is presented in four sections: Site Background, Second Semi-Annual 2017 Groundwater Monitoring and Sampling Program, Light Non-Aqueous Phase Liquid (LNAPL) Monitoring, and Conclusions and Recommendations.

SITE BACKGROUND

The Site is an active Chevron-branded service station located on the eastern corner at the intersection of Hesperian Boulevard and Post Office Road in San Lorenzo, California. The Site has been occupied by a service station since approximately 1969. Current Site features include three 10,000-gallon fiberglass gasoline underground storage tanks (USTs), one 10,000-gallon fiberglass diesel UST, three fuel dispenser islands, and a station building with three service bays. The USTs are in the southern portion of the Site, the fuel dispenser islands are in the central portion of the Site, and the station building is in the northeastern portion of the Site. In 1983, two 10,000-gallon and one 5,000-gallon steel USTs were replaced with the current fiberglass tanks. In January 1994, the fuel dispenser islands were replaced, and in March 1994, a 1,000-gallon steel waste oil UST located northeast of the station building was replaced with a 1,000-gallon fiberglass UST, which was later removed in 2001.

Land use near the Site consists primarily of commercial and residential properties. The Site is bounded on the northwest by Post Office Road, to the northeast by a parking lot for the post office, to the southeast by a commercial building, and on the southwest by Hesperian Boulevard.

SECOND SEMI-ANNUAL 2017 GROUNDWATER MONITORING AND SAMPLING PROGRAM

Gettler-Ryan Inc. (G-R) performed the Second Semi-Annual 2017 groundwater monitoring and sampling event during Second Semi-Annual 2017 on October 27, 2017. G-R's standard operating procedures (SOPs) and field data sheets are included in **Attachment A**. G-R gauged depth-to-groundwater (DTW) in all 11 Site wells (C-1 through C-11) prior to collecting groundwater samples, and all 11 Site wells were sampled.

Wells C-2, C-7, and C-8 were purged and sampled using low-flow procedures, while all other Site wells were purged and sampled using disposable bailers. Turbidity measurements were collected at wells C-2 and C-8 during low-flow sampling, and post-purge turbidity measurements were 47.8 nephelometric turbidity units (NTU) and 56.9 NTU, respectively.

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Investigation-derived waste (IDW) generated during the Second Semi-Annual 2017 groundwater monitoring and sampling event was transported by Clean Harbors Environmental Services to Seaport Environmental in Redwood City, California.

Groundwater Elevation and Gradient

Well construction details and a screen interval assessment for each Site well are presented in **Table 1**. Wells C-1 through C-8 are currently screened across the prevailing groundwater table, while the DTW measurements in wells C-9 through C-11 are approximately 0.5 to 2.4 feet above the respective screen intervals. Current and historical groundwater elevation data are presented in **Table 2**. A groundwater elevation contour map (based on Second Semi-Annual 2017 data) is shown on **Figure 2**. The direction of groundwater flow at the time of sampling was generally towards the southwest at an approximate hydraulic gradient ranging from 0.003 to 0.014 feet per foot (ft/ft). This is consistent with the historical direction of groundwater flow, which has predominantly been toward the southwest, as shown by the groundwater flow direction rose diagram on **Figure 3** illustrating the direction of groundwater flow from Fourth Quarter 1989 to present.

Schedule of Laboratory Analysis

Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline range organics (TPH-GRO) and total petroleum hydrocarbons as diesel range organics (TPH-DRO) with silica gel cleanup using United States Environmental Protection Agency (US EPA) Method 8015B (SW-846) and benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds) using US EPA Method 8260B (SW-846). In addition, the groundwater sample collected from well C-8 was analyzed for naphthalene using US EPA Method 8260B (SW-846).

Groundwater Analytical Results

During Second Semi-Annual 2017, groundwater samples were collected from 11 Site wells (C-1 through C-11). Current and historical groundwater analytical results are included in **Table 2** and **Table 3**.

A figure showing the latest groundwater analytical data plotted on a Site map is included as **Figure 4**. A TPH-GRO isoconcentration map is shown on **Figure 5**. A TPH-DRO isoconcentration map is shown on **Figure 6**. An isoconcentration map was not developed for benzene because concentrations were below method detection limits (MDLs) in all Site wells except for well C-8, which had a benzene concentration below the California maximum contaminant level (MCL) for drinking water of 1 microgram per liter (µg/L).

The certified laboratory analysis report and chain-of-custody documents are presented as **Attachment B**. Hydrographs based on current and historical groundwater elevations and analytical results are included in **Attachment C**. Second Semi-Annual 2017 groundwater analytical results are presented in the following table.

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Well ID	TPH-GRO (µg/L)	TPH-DRO* (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
C-1	<50	130	<0.5	<0.5	<0.5	<0.5
C-2	110	<50	<0.5	<0.5	<0.5	<0.5
C-3	<50	<50	<0.5	<0.5	<0.5	<0.5
C-4	<50	<50	<0.5	<0.5	<0.5	<0.5
C-5	<50	<50	<0.5	<0.5	<0.5	<0.5
C-6	<50	<50	<0.5	<0.5	<0.5	<0.5
C-7	410	94	<0.5	<0.5	<0.5	<0.5
C-8	7,400	1,600	0.6	0.7	9	1
C-9	<50	<50	<0.5	<0.5	<0.5	<0.5
C-10	<50	<50	<0.5	<0.5	<0.5	<0.5
C-11	<50	<50	<0.5	<0.5	<0.5	<0.5

Table Notes:

µg/L = micrograms per liter

- * = using silica gel cleanup
- < = constituent was not detected at or above the noted laboratory reporting limit
- -- = constituent was not analyzed

LNAPL MONITORING

During Second Quarter 2012, measurable LNAPL was observed in well C-2 for the first time since 1991, prompting routine LNAPL monitoring and recovery, which was conducted through Fourth Quarter 2014. Stantec discontinued LNAPL monitoring at well C-2 following Fourth Quarter 2014, because no LNAPL or sheen had been observed since Third Quarter 2013. However, LNAPL was reportedly observed in well C-2 during Second Quarter 2015 at a thickness of 0.02 feet, and quarterly LNAPL monitoring events were resumed during Fourth Quarter 2015. G-R performed First, Second, and Third Quarter 2016 LNAPL monitoring events, and no measurable LNAPL or sheen was observed during any of these quarterly events. Additionally, LNAPL was not observed during the First or Second Semi-Annual 2017 groundwater monitoring and sampling events.

LOW THREAT CLOSURE

An evaluation of the Site compared to the State Water Resources Control Board (SWRCB) Low-Threat UST Case Closure Policy (LTCP) criteria was included in the *Third Quarter 2016 LNAPL Monitoring Report and Case Closure Request*, dated October 28, 2016 (Appendix D). Alameda County Environmental Health (ACEH) responded to the request in a letter dated December 21, 2016 (Appendix E), denying closure and requesting a minimum of one round of groundwater sampling in February 2017. The results of the February 2017 groundwater sampling were presented in the *First Quarter 2017 Semi-Annual Groundwater Monitoring Report and Request for Closure*, dated April 13, 2017. ACEH responded to the additional request for closure in a letter dated June 2, 2017, again denying closure and requesting a minimum of one round of groundwater sampling in October 2017 (Appendix E).

The Second Semi-Annual 2017 groundwater sampling event indicates the dissolved-phase petroleum hydrocarbon plume at the Site is stable to decreasing in overall size and concentration as shown in the hydrographs (Attachment C). Although an increase in petroleum hydrocarbon concentrations was observed at well C-7 during First Quarter 2017, this was likely due to the relatively high groundwater table during the unusually rainy winter. Between First Semi-Annual 2017 and Second Semi-Annual 2017, the groundwater elevation at well C-7 decreased by approximately 3.5 feet and petroleum hydrocarbon concentrations reduced from 3,200 µg/L to 410 µg/L for TPH-GRO,

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600 µg/L to 94 µg/L for TPH-DRO, and 1 µg/L to <0.5 µg/L for benzene, as shown in the hydrograph C-7 has a downward trend. The down-gradient extent of the petroleum hydrocarbon plume remains defined to less than 250 feet from the source area and benzene concentrations were not detected above the California MCL for benzene in drinking water during the current event. Methyl tertiary-butyl ether (MtBE) analysis was discontinued following the Fourth Quarter 2013 sampling event, because MtBE had not been detected above MDLs in any Site well since Third Quarter 2012. The request for closure can be found in Attachment D, figures and historical tables can be found in the previously submitted request for closure

CONCEPTUAL SITE MODEL AND DATA GAP WORK PLAN

Per ACDEH letter dated June 2, 2017, request for a focused site conceptual model (SCM), please refer to Stantec's Site Conceptual Model, dated April 28, 2014, Soil and Groundwater Investigation Report, dated July 31, 2015, and Second Quarter 2016 Semi-Annual Groundwater Monitoring Report, dated June 6, 2016, for historical soil and groundwater results, and associated Figures.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, CEMC renews its request for case closure. As based on our review, site conditions continue to meet the general and media-specific criteria established in the Low-Threat Policy, and therefore pose a low threat to human health, safety, and the environment, and satisfy the case-closure requirements of Health and Safety Code section 25296.10, and case closure is consistent with Resolution 92-49 that requires that cleanup goals be met within a reasonable time frame.

Groundwater data, as presented in this Closure Request, support a conclusion that the site and the impacted groundwater pose no significant threat to human health or the environment. Therefore, effective immediately, CEMC shall cease groundwater monitoring and sampling activities pending a response and further direction from the ACDEH.

As State Water Resources Control Board (SWRCB) staff are directed to automatically review an underground storage tank (UST) case closure denial within 6 months of the date of the denial by the Local Oversight Program (i.e., ACDEH). Per Geotracker the SWRCB have not completed their case closure review from ACEH closure denial letter of June 2, 2017. CEMC respectfully requests that any further directives occur after receipt of a determination from SWRCB regarding their review of the ACDEH case closure denial

If you have any questions, please contact the Stantec Project Manager, Eva Hey, at (925) 296-2101 or eva.hey@stantec.com.

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LIMITATIONS

This document entitled Second Semi-Annual 2017 Groundwater Monitoring Report and Request for Closure was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Chevron Environmental Management Company (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

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Jaff Auchterlonie, P.G.

Principal Geologist

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Attachments:

Table 1 – Well Details / Screen Interval Assessment – October 27, 2017

Table 2 – Groundwater Monitoring Data and Analytical Results

Table 3 – Additional Groundwater Analytical Results

Figure 1 – Site Location Map

Figure 2 – Groundwater Elevation Contour Map – October 27, 2017

Figure 3 – Groundwater Flow Direction Rose Diagram – October 27, 2017

Figure 4 – Site Plan Showing Groundwater Concentrations – October 27, 2017

Figure 5 – TPH-GRO Isoconcentration Map – October 27, 2017

Figure 6 – TPH-DRO Isoconcentration Map – October 27, 2017

Attachment A – Gettler-Ryan Inc. Field Data Sheets and Standard Operating Procedures – October 27, 2017

Attachment B - Certified Laboratory Analysis Reports and Chain-of-Custody Documents

Attachment C – Hydrographs

Attachment D - Third Quarter 2016 LNAPL Monitoring Report and Case Closure Request

Attachment E - ACDEH Closure Request Response Letters - December 21, 2016 and June 2, 2017

cc:

Ms. Carryl MacLeod, Chevron Environmental Management Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583 – Electronic Copy

Mr. Scott Bohannon, Bohannon Organization, 60 31st Avenue, San Mateo, CA 94403 – Electronic Copy

Mr. Bob Webster, Bohannon Organization, 60 31st Avenue, San Mateo, CA 94403 – Electronic Copy



Table 1 Well Details / Screen Interval Assessment October 27, 2017

Chevron-branded Service Station 90504 15900 Hesperian Boulevard San Lorenzo, California

Well ID	Date Installed	Well Type	Casing Diameter (inches)	Top of Casing (feet above msl)	Construction Well Depth (feet bgs)	Current Well Depth (feet below TOC)	Current Depth to Groundwater (feet below TOC)	Screen Interval (feet bgs)	Screen Interval Assessment
C-1	12/29/83	Monitoring	3	32.80	20.00	18.58	10.65	5-20	Depth-to-groundwater within screen interval.
C-2	12/29/83	Monitoring	3	33.46	20.00	19.11	10.78	5-20	Depth-to-groundwater within screen interval.
C-3	12/29/83	Monitoring	3	35.46	20.00	19.41	12.87	5-20	Depth-to-groundwater within screen interval.
C-4	12/29/83	Monitoring	3	35.23	20.00	19.90	12.54	5-20	Depth-to-groundwater within screen interval.
C-5	12/29/83	Monitoring	3	34.61	20.00	19.90	11.90	5-20	Depth-to-groundwater within screen interval.
C-6	11/27/89	Monitoring	2	36.57	25.50	24.47	13.98	5-25	Depth-to-groundwater within screen interval.
C-7	11/28/89	Monitoring	2	32.32	25.50	24.85	10.17	8-25	Depth-to-groundwater within screen interval.
C-8	11/27/89	Monitoring	2	33.25	25.50	24.82	11.45	5-25	Depth-to-groundwater within screen interval.
C-9	08/28/90	Monitoring	2	32.97	25.50	24.68	11.50	12-25	Depth-to-groundwater above screen interval.
C-10	10/28/90	Monitoring	2	31.16	25.50	24.66	9.73	12-25	Depth-to-groundwater above screen interval.
C-11	08/28/90	Monitoring	2	31.23	25.50	24.71	9.60	12-25	Depth-to-groundwater above screen interval.

Notes:

bgs = below ground surface

msl = mean sea level

TOC = top of casing

Table 2 Groundwater Monitoring Data and Analytical Results Chevron-branded Service Station 90504

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	В	T	E	Х	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
C-1															
06/06/89									5,100	250	170	200	990		
12/08/89			13.14	0.01											
09/07/90	33.93	19.91**	14.04	0.03											
12/20/90	33.93	20.07**	13.87	0.01											
03/15/91	33.93	22.53	11.40						37,000	220	53	53	1,900		
06/28/91	33.93	21.68	12.25						3,300	110	6.2	6.2	350		
09/26/91	33.93	19.91	14.02						3,200	220	6.9	6.9	710		
01/27/92	33.93	21.30	12.63						330	20	0.6	0.6	48		
04/20/92	33.93	23.50	10.43						2,700	130	3.4	3.4	690		
07/17/92	33.93	21.32	12.61						490	17	<0.5	<0.5	52		
01/20/93	33.93	24.51	9.42												
07/28/93	33.93	23.45	10.48												
10/27/93	32.80	21.48	11.32						240	3.6	<0.5	11	23		
03/31/94	32.80	23.35	9.45						530	23	1.2	10	120		
06/08/94	32.80	22.87	9.93						990	15	1.5	42	89		
09/29/94	32.80	INACCESSIB										72			
11/09/94	32.80	INACCESSIB													
12/14/94	32.80	INACCESSIB													
03/30/95	32.80	24.79	8.01						3,900	21	7.2	190	250		
06/30/95	32.80	24.77	9.82						1,400	3.1	0.8	54	95		
09/22/95		22.70	10.60						620 ⁷	0.7	<0.5	3.3	3.5		
	32.80											3.3 43	3.5 85	 79	
12/11/95	32.80	22.50	10.30						210	2.4	< 0.5				
03/08/96 06/21/96	32.80	25.15	7.65						750	2.1	< 0.5	22 94	34	330	
	32.80	23.52	9.28						2,800	9.0	< 0.5		83	1,300	
09/27/96	32.80	22.52	10.28						770	0.5	<0.5	5.1	6.1	580	
01/03/97	32.80	24.95	7.85						1,800	2.8	<0.5	51	41	110	
03/28/97	32.80	23.43	9.37						720	0.6	<0.5	4.7	3.7	200	
09/30/97	32.80	MONITORED		.Υ											
03/28/98	32.80	25.08	7.72						940 ⁸	3.9	<0.5	17	4.7	290	
03/19/99	32.80	24.29	8.51						320	< 0.5	<0.5	8.5	2.5	350	
03/21/00	32.80	24.72	8.08						432	< 0.5	2.04	5.33	0.658	154	
08/28/00	32.80	MONITORED) /SAMPLEI	D ANNUALLY											
03/02/01	32.80	24.09	8.71	0.00					<50.0	< 0.500	< 0.500	< 0.500	< 0.500	32.8	
09/04/01	32.80	MONITORED) /SAMPLEI	D ANNUALLY											
03/21/02	32.80	24.18	8.62	0.00					<50	< 0.50	< 0.50	< 0.50	<1.5	20	
09/04/02	32.80	MONITORED) /SAMPLEI	D ANNUALLY											
03/31/03	32.80	23.93	8.87	0.00					<50	< 0.5	< 0.5	< 0.5	<1.5	40	
09/17/03	32.80	MONITORED) /SAMPLEI	D ANNUALLY											
03/05/04 ¹²	32.80	24.46	8.34	0.00					<50	<0.5	<0.5	<0.5	<0.5	15	
09/03/04	32.80	MONITORED													
07/03/04	32.00	MONITOREL) /SMIVIFLEI	> AININUALLY											

WELL ID/ DATE	TOC (ff.)	GWE (msl)	DTW (ff.)	LNAPL Thickness (ft.)	TOTAL TPH (μg/L)	TPH-MO (µg/L)	ΤΡΗ C13-C40 (μg/L)	TPH-DRO (µg/L)	TPH-GRO (μg/L)	B (µg/L)	Τ (μg/L)	Ε (μg/L)	Χ (μg/L)	MtBE (μg/L)	HVOCs (µg/L)
C-1 (cont)	(11.)	(IIII)	(11.)	(11.)	(P9/-)	(P9/-/	(P9/1/	(P9/L)	(P9/1)	(P9/1)	(P9/1)	(P9/L)	(P9/1)	(P9/1/	(P9/1/
03/02/05 ¹²	32.80	24.76	8.04	0.00					<50	<0.5	<0.5	<0.5	0.5	1	
09/02/05	32.80			D ANNUALLY											
03/24/06 ¹²	32.80	25.04	7.76	0.00					<50	<0.5	<0.5	<0.5	<0.5	4	
03/05/07 ¹²	32.80	24.00	8.80	0.00					160	<0.5	<0.5	<0.5	<0.5	14	
03/17/08 ¹²	32.80	23.89	8.91	0.00					<50	<0.5	<0.5	<0.5	<0.5	0.9	
03/03/09 ¹²	32.80	24.13	8.67	0.00					<50	<0.5	<0.5	<0.5	<0.5	0.8	
03/17/10 ¹²	32.80	24.43	8.37	0.00					<50	<0.5	<0.5	<0.5	<0.5	0.5	
03/04/11 ¹²	32.80	24.09	8.71	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/23/12 ¹²	32.80	23.46	9.34	0.00				230/7314	<50	<0.5	1	<0.5	<0.5	0.6	
09/04/12 ¹²	32.80	19.51	13.29	0.00	590 ¹⁶ / 320 ^{14,15,16,17}	590 ¹⁶ /320 ^{14,15,16,17}		720/ 740 ^{14,15,18}	<50	<0.5	<0.5	<0.5	<0.5	0.7	
12/07/12 ¹²	32.80	23.81	8.99	0.00	330 ¹⁶ / 51 ^{14,15,16}	330 ¹⁶ / 51 ^{14,15,16}		95/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/12/13 ¹²	32.80	23.35	9.45	0.00	650 ¹⁶ / 320 ^{14,15,16}	650 ¹⁶ / 320 ^{14,15,16}		220/ 70 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
06/11/13 ¹²	32.80	22.70	10.10	0.00	400 ¹⁶	40016		54/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/10/13 ¹²	32.80	22.05	10.75	0.00	48 ¹⁶	48 ¹⁶		130/ 100 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/04/13 ¹²	32.80	22.35	10.45	0.00	590 ¹⁶	590 ¹⁶		410/ 290 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/07/14 ²⁵	32.80	22.50	10.30	0.00	29016	29016		100/ 110 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/25/14 ²⁵	32.80	22.28	10.52	0.00	<48		<48	<5014,15	<50	<0.5	< 0.5	<0.5	< 0.5		
08/29/14 ²⁵	32.80	21.57	11.23	0.00	110 ^{14,15,16}	110 ^{14,15,16}		84 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
12/12/14 ²⁵	32.80	24.26	8.54	0.00	<38 ^{14,15,16}	<38 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	< 0.5	<0.5	<0.5		
06/01/15 ^{25,26}	32.80	22.58	10.22	0.00				< 50 14,15	<50	<0.5	<0.5	<0.5	<0.5		
06/01/15 ²⁵	32.00	22.30	10.22	0.00				< 50 14,15	<50	<0.5	< 0.5	< 0.5	<0.5		
10/23/15 ^{25,26}	32.80	21.35	11.45	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
04/07/16 ²⁵	32.80	23.97	8.83	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
02/08/17 ²⁵	32.80	25.80	7.00	0.00				<7214,15,29	<50	<0.5	<0.5	<0.5	<0.5		
10/27/17 ²⁵	32.80	22.15	10.65	0.00				130 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
C-2															
06/06/89									130,000	14,000	28,000	3,400	24,000		
12/08/89 09/07/90	 34.21	 20.01**	13.44 14.28	0.15 0.10											

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	В	T	E	Х	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
C-2 (cont)															
12/20/90	34.2	20.16**	14.06	0.01											
03/15/91	34.2	22.63**	11.59	0.01					1,200,000	4,700	16,000	13,000	140,000		
06/28/91	34.2		12.55						150,000	3,500	4,200	2,100	16,000		
09/26/91	34.2	20.01	14.20						4,900	220	290	130	880		
01/27/92	34.2	1 21.75	12.46						8,200	510	590	230	1,300		
04/20/92	34.2	23.97	10.24						19,000	1,700	1,700	930	4,700		
07/17/92	34.2	1 21.40	12.81						20,000	950	950	1,300	4,700		
01/20/93	34.2	25.42	8.79												
10/27/93	33.4	3 21.10	12.36						1,600	63	5.8	5.9	190		
03/31/94	33.4	3 23.84	9.62						12,000	300	96	510	2,700		
06/08/94	33.4	3 23.48	9.98						8,700	140	35	250	1,500		
09/28/94	33.4	S INACCESSI	BLE												
11/09/94	33.4	S INACCESSI	BLE												
12/14/94	33.4	S INACCESSI	BLE												
03/30/95	33.4	5 25.77	7.69						1,400	17	5.4	52	240		
06/30/95	33.4	3 23.56	9.90						730	22	2.6	50	240		
09/22/95	33.4	22.85	10.61						2,100 ⁷	66	7.3	140	550		
12/11/95	33.4	3 23.08	10.38						3,700	23	<0.5	68	300	1,000	
03/08/96	33.4		7.70						2,200	19	<5.0	63	290	1,300	
06/21/96	33.4		9.37						2,200	23	1.1	70	260	2,300	
09/27/96	33.4		10.58						5,500	12	0.6	30	110	2,200	
01/03/97	33.4		7.90						750	4.2	<0.5	29	120	51	
03/28/97	33.4		9.35						1,300	12	1.5	24	86	310	
09/30/97	33.4	S MONITORE	D ANNUALL	Y											
03/28/98	33.4		8.00						1,100 ⁸	14	<5.0	34	79	710	
03/19/99	33.4		8.45						1,400	15	<0.5	56	130	460	
03/11/00	33.4		8.09						5,420	9.69	<0.5	76.5	125	168	
08/28/00	33.4			ANNUALLY						7.07		70.5			
03/02/01	33.4		8.78	0.00					<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	
09/04/01	33.4			O.OO ANNUALLY					<50.0 	~0.500 	~0.300 		~0.500 	~3.00 	
03/21/02	33.4		8.71	0.00					<50	<0.50	<0.50	<0.50	<1.5	4.5	
09/04/02	33.4			O.OU ANNUALLY											
03/31/03	33.4		8.93	0.00					<50	<0.5	1.0	<2.0	2.6	<2.5	
09/17/03	† 32.8			D ANNUALLY											
03/05/04 ¹²	32.8		8.39							1	<0.5		10		
				0.00					940	ı		21		45	
09/03/04	32.80			D ANNUALLY											
03/02/05 ¹²	32.8	24.67	8.13	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/02/05	32.80) MONITORE	D /SAMPLEI	D ANNUALLY											
03/24/06 ¹²	32.8	24.99	7.81	0.00					<50	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	
03/05/07 ¹²	32.8	23.89	8.91	0.00					1,000	1	<0.5	8	1	<0.5	
03/17/08 ¹²	33.4		8.11	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/03/09 ¹²	33.4	5 25.43	8.03	0.00					<50	<0.5	0.7	<0.5	0.5	< 0.5	
03/17/10 ¹²	33.4	5 24.95	8.51	0.00					<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	

WELL ID/ DATE		TOC (ff.)	GWE (msl)	DTW (ff.)	LNAPL Thickness (ff.)	TOTAL TPH (µg/L)	TPH-MO (µg/L)	ΤΡΗ C13-C40 (μg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	Β (μg/L)	Τ (μg/L)	Ε (μg/L)	Χ (μg/L)	MtBE (μg/L)	HVOCs (µg/L)
C-2 (cont)																
03/04/11 12		33.46	24.64	8.82	0.00					<50	<0.5	< 0.5	<0.5	<0.5	<0.5	
03/23/12		33.46	23.99**	9.71	0.30	NOT SAMPLE	D DUE TO THE P	RESENCE OF	LNAPL							
09/04/12		33.46	23.09**	10.39	0.03	NOT SAMPLE	D DUE TO THE P	RESENCE OF	LNAPL							
12/07/12 ¹²		33.46	24.34	9.12	0.00	27,000 ¹⁶ / 14,000 ^{14,16,19}	27,000 ¹⁶ / 14,000 ^{14,16,19}		18,000/ 14,000 ^{14,20}	140	<0.5	<0.5	<0.5	0.6	<0.5	
03/12/13 ¹²		33.46	23.85	9.61	0.00	18,000 ¹⁶ / 11,000 ^{14,16,19}	18,000 ¹⁶ / 11,000 ^{14,16,19}		26,000/ 20,000 ^{14,23}	210	<0.5	<0.5	<0.5	0.7	<0.5	
06/11/13 ¹²		33.46	23.26	10.20	0.00	2,600 ¹⁶	2,600 ¹⁶		11,000/ 7,100 ^{14,23}	690	<0.5	<0.5	1	0.7	<0.5	
09/10/13 ¹²		33.46	22.56	10.90	0.00	5,400 ¹⁶	5,400 ¹⁶		23,000/ 20,000 ^{14,15}	1,100	<0.5	<0.5	1	0.6	<0.5	
12/04/13 ¹²		33.46	22.86	10.60	0.00	8,300 ¹⁶	8,300 ¹⁶		11,000/ 8,500 ^{14,15}	670	<0.5	<0.5	<0.5	0.6	<0.5	
02/07/14 ²⁵		33.46	23.16	10.30	0.00	6,600 ¹⁶	6,600 ¹⁶		5,800/ 3,000 ^{14,15}	420	<0.5	<0.5	<0.5	<0.5		
06/25/14 ²⁵		33.46	22.78	10.68	0.00	51,000		51,000	3,000 ^{14,15}	120	<0.5	<0.5	<0.5	<0.5		
08/29/14 ^{25,26}						61 14,15,16	61 14,15,16		2,800 ^{14,15}	1,600	<0.5	<0.5	2	2		
08/29/14 ²⁵		33.46	22.25	11.21	0.00	2,700 ^{14,16,23}	2,700 ^{14,16,23}		4,900 ^{14,15}	1,700	<0.5	<0.5	2	1		
12/12/14 ^{25,26}						260 ^{14,15,16}	260 ^{14,15,16}		<50 ^{14,15}	54	<0.5	<0.5	<0.5	<0.5		
		33.46	24.71	8.75	0.00	1,000 ^{14,15,16}	1,000 ^{14,15,16}		1,300 ^{14,15}							
12/12/14 ²⁵		22.47	02 10**	10.27	0.00			 		<50	<0.5	<0.5	<0.5	<0.5		
06/01/15		33.46	23.12**	10.36	0.02		D DUE TO THE P			400	-0.5					
10/23/15 ^{25,26}		33.46	21.68	11.78	0.00				140 ^{14,15}	490	<0.5	<0.5	<0.5	0.7		
04/07/16 ^{25,26}		33.46	24.51	8.95	0.00				1,700 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
02/08/17 ^{25,26} 10/27/17^{25,26}		33.46 33.46	26.45 22.68	7.01 10.78	0.00 0.00	 	 		150 ^{14,15,29} <50^{14,15}	<50 110	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	 	
C-3																
06/06/89										2,600	63	20	390	370		
12/08/89										680	6.0	1.0	31	58		
09/07/90	(D)	35.46	20.15	15.31						490	6.0	<0.5	41	120		
09/07/90 12/20/90	(D)	35.46	 20.29	 15 17						460	6.0	<0.5 <0.5	40 27	110 130		
03/06/91		35.46 35.46	20.29	15.17 13.27						100 1,300	5.0 7.0	<0.5 <0.5	75	250		
03/06/91	(D)	35.46 35.46		13.27						1,400	8.0	<0.5	75 76	250		
06/28/91	(- /	35.46	21.79	13.67						770	6.0	<0.5	81	71		
06/28/91	(D)	35.46								990	5.5	<0.5	86	75		
09/26/91		35.46	20.14	15.32						1,400	7.9	<0.5	98	340		
01/27/92		35.46	21.55	13.91						150	0.7	<0.5	12	12		
04/20/92		35.46	23.80	11.66						1,600	9.3	1.0	190	370		

WELL ID/	TOC	GWE	DTW	LNAPL Thickness	TOTAL TPH	TPH-MO	TPH C13-C40	TPH-DRO	TPH-GRO	В	т	E	х	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	_ (μg/L)	, (μg/L)	(μg/L)	(μg/L)
C-3 (cont)															
07/17/92	35.4	3 21.50	13.96						460	18	<0.5	20	52		
10/29/92	35.4	19.95	15.51						520	2.4	1.0	30	79		
01/20/93	35.4	5 24.47	10.99						4,200	7.4	< 0.5	140	380		
05/03/93	35.4	24.49	10.97						1,300	6.8	3.2	71	170		
07/28/93	35.4	3 23.05	12.41						220	1.4	< 0.5	17	39		
10/27/93	35.4	3 21.78	13.37						1,800	5.5	0.7	68	290		
03/31/94	35.4	3 23.90	11.56 ¹						310	1.2	< 0.5	19	54		
06/08/94	35.4	3 23.39	12.07						300	2.7	1.6	19	48		
09/29/94 ²	35.4	3 21.62	13.84						2,500	<25	<25	<25	220		
11/09/94 ⁵	35.4	5							170	<0.5	0.8	3.3	16		
12/14/94	35.4	3 23.61	11.85						510	3.2	1.4	28	60		
03/30/95	35.4	25.85	9.61						66	<0.5	<0.5	1.1	2.4		
06/30/95	35.4	3 23.96	11.50						1,500	1.9	8.1	100	300		
09/22/95	35.4	22.88	12.58						600 ⁷	0.7	<0.5	43	110		
12/11/95	35.4	3 22.91	12.55						670 ⁸	< 0.5	<0.5	7.0	13	15	
03/08/96	35.4	5 25.80	9.66						3,600	7.5	33	130	400	1,100	
06/21/96	35.4	3 23.68	11.78						310	<0.5	< 0.5	16	49	57	
09/27/96	35.4		12.37						250	< 0.5	<0.5	3.6	9.6	44	
01/03/97	35.4		9.89						170	<0.5	1.2	4.5	15	15	
03/28/97	35.4		10.96						60	<0.5	<0.5	1.7	1.8	23	
09/30/97	35.4		ED ANNUALL	_Y											
03/28/98	35.4		9.72						<50	0.88	<0.5	<0.5	<0.5	16	
03/19/99 03/21/00	35.4d 35.4d		10.02 10.10						<50 122	<0.5 <0.5	<0.5 <0.5	<0.5 4.96	0.65 11. <i>7</i>	12 6.13	
08/28/00	35.4			 D ANNUALLY						<0.5 	<0.5 	4.70		6.13	
03/02/01	35.4		10.79	0.00					<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	
09/04/01	35.4			O.OO ANNUALLY						~0.500 	~0.500 		~0.500 	~J.00	
03/21/02	35.4		10.72	0.00					<50	< 0.50	<0.50	< 0.50	<1.5	<2.5	
09/04/02	35.4			O ANNUALLY											
03/31/03	35.4		11.15	0.00					<50	< 0.5	<0.5	<0.5	<1.5	<2.5	
	† 32.80		ED /SAMPLEI	D ANNUALLY											
03/05/04 ¹²	32.80	22.42	10.38	0.00					<50	<0.5	< 0.5	<0.5	<0.5	<0.5	
09/03/04	32.80) MONITORE	ED /SAMPLEI	D ANNUALLY											
03/02/05 ¹²	32.80	22.67	10.13	0.00					<50	<0.5	< 0.5	<0.5	<0.5	< 0.5	
09/02/05	32.80) MONITORE	ED /SAMPLEI	D ANNUALLY											
03/24/06 ¹²	32.80		9.85	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/05/07 ¹²	32.80		10.97	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/17/08 ¹²	35.4		11.23	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/03/09 ¹²	35.4		11.01	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/17/10 ¹²	35.4		10.67	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/04/11 ¹²	35.4		10.83	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
00/04/11	55.40	24.03	10.03	0.00					\J U	~0. 5	~0. 5	~0. 5	~0. 5	~ 0.5	

				LNAPL			TPH								
WELL ID/ DATE	TOC (ff.)	GWE (msl)	DTW (ff.)	Thickness (ft.)	TOTAL TPH (µg/L)	TPH-MO (μg/L)	C13-C40 (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	τ (μg/L)	Ε (μg/L)	Χ (μg/L)	MtBE (µg/L)	HVOCs (µg/L)
	()	()	()	()	(F9/-/	(F9/-/	(P9/-)	(F9/-/	(49/2)	(P9/-/	(49/-/	(P9/-)	(49/-)	(P9/-)	(P9/-/
C-3 (cont) 03/23/12 ¹²	35.46	23.99	11.47	0.00				<50/<50 ¹⁴	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
	001.10	20.77		0.00	<41 ¹⁶ /	<41 ¹⁶ /		<50/	00	0.0	0.0	0.0	0.0	0.0	
09/04/12 ¹²	35.46	23.01	12.45	0.00	<41 / <41 ^{14,15,16}	<41 / <41 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/07/12 ¹²	35.46	24.32	11.14	0.00	64 ¹⁶ / <38 ^{14,15,16}	64 ¹⁶ / <38 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/12/13 ¹²	35.46	23.86	11.60	0.00	<41 ¹⁶ / <41 ^{14,15,16}	<41 ¹⁶ / <41 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
06/11/13 ¹²	35.46	23.21	12.25	0.00	<39 ¹⁶	<39 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/10/13 ¹²	35.46	22.53	12.93	0.00	<38 ¹⁶	<38 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/04/13 ¹²	35.46	21.53	13.93	0.00	<38 ¹⁶	<38 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/07/14 ²⁵	35.46	22.95	12.51	0.00	<4116	<4116		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/25/14 ²⁵	35.46	22.82	12.64	0.00	<50		<50	< 5014,15	<50	<0.5	< 0.5	<0.5	<0.5		
08/29/14 ²⁵	35.46	22.03	13.43	0.00	<40 ^{14,15,16}	<40 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	< 0.5	<0.5	<0.5		
12/12/14 ²⁵	35.46	24.67	10.79	0.00	<39 ^{14,15,16}	<39 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/01/15 ²⁵	35.46	23.02	12.44	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/23/15 ²⁵	35.46	21.55	13.91	0.00				<5014,15	<50	<0.5	<0.5	<0.5	<0.5		
04/07/16 ²⁵	35.46	24.41	11.05	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
02/08/17 ²⁵	35.46	26.28	9.18	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/27/17 ²⁵	35.46	22.59	12.87	0.00				< 50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
C-4															
06/06/89									<50	<0.05	<1.0	<1.0	<3.0		
12/08/89									<500	<0.5	<0.5	<0.5	<0.5		
09/07/90	35.78	20.20	15.58						<50	<0.5	<0.5	<0.5	<0.5		
12/20/90	35.78	20.36	15.42						170	1.0	<0.5	<0.5	4.0		
03/06/91	35.78	22.24	13.54						<50	<0.5	<0.5	<0.5	<0.5		
06/28/91	35.78	21.85	13.93						<50	<0.5	<0.5	<0.5	<0.8		
09/26/91	35.78	20.14	15.64						<50	<0.5	<0.5	<0.5	<0.5		
09/26/91	35.78		15.64						<50	<0.5	<0.5	<0.5	 -0 F		
01/27/92	35.78	21.82	13.96						<50	<0.5	<0.5	<0.5	<0.5		
04/20/92	35.78	24.07	11.71						<50	<0.5	<0.5	<0.5	<0.5		
07/17/92	35.78	21.59 20.06	14.19						<50	<0.5	<0.5	<0.5 <0.5	<0.5		
10/29/92	35.78		15.72						<50	<0.5	<0.5		<0.5		
01/20/93	35.78 35.78	24.61	11.17						<50	<0.5	<0.5	<0.5 <0.5	<0.5		
05/03/93	35.78	24.84	10.94						<50	<0.5	<0.5	<0.5	<0.5		

				LNAPL			TPH								
WELL ID/ DATE	TOC (ff.)	GWE	DTW	Thickness (#.)	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	Β (μg/L)	T (μg/L)	E	X	MtBE	HVOCs
	(11.)	(msl)	(ft.)	(11.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
C-4 (cont)	05.70	00.00	10.40						-50	.0.5	.0.5		.1.5		
07/28/93	35.78	23.38	12.40						<50	<0.5	<0.5	<0.5	<1.5		
10/27/93 03/31/94	35.23 35.23	21.91 INACCESSI	13.32						<50 	<0.5 	<0.5 	<0.5 	<1.5 		
06/08/94	35.23	23.31	11.92						<50	<0.5	<0.5	 <0.5	<0.5		
09/29/94 ^{2,4}	35.23	21.47	13.76						<2,500	<25	<25	<25	<25		ND ³
11/09/94 ^{4,5}	35.23								<50	<0.5	<0.5	<0.5	<0.5		ND ³
12/14/94 ⁶	35.23	23.44	11.79						<50	2.1	3.0	1.9	3.7		ND^3
03/30/95	35.23	26.22	9.01						<50	< 0.5	<0.5	< 0.5	< 0.5		
06/30/95	35.23	23.79	11.44						<50	<0.5	<0.5	< 0.5	<0.5		
09/22/95	35.23	22.72	12.51						<50	<0.5	<0.5	<0.5	<0.5		
12/11/95	35.23	22.61	12.62						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/08/96	35.23	25.60	9.63						<50	<0.5	<0.5	<0.5	0.6	<5.0	
06/21/96	35.23	23.99	11.24						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
09/27/96	35.23	22.92	12.31						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
01/03/97	35.23	25.54	9.69						<50	1.5	7.2	1.3	6.2	<5.0	
03/28/97	35.23	24.23	11.00						<50	5.0	8.3	0.8	4.7	<5.0	
NOT MONITORED	-														
03/20/12 ¹³	35.23	24.01	11.22												
03/23/12 ¹²	35.23	23.94	11.29		<39/<39 ¹⁴	<39/<39 ¹⁴		<50/<50 ¹⁴	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12					<40 ¹⁶ /	<40 ¹⁶ /		<50/							
09/04/12 ¹²	35.23	23.00	12.23		<40 ^{14,15,16}	<40 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
					55 ¹⁶ /	55 ¹⁶ /		151							
12/07/12 ¹²	35.23	24.33	10.90		55 ¹³ / <40 ^{14,15,16}	55 ¹³ / <40 ^{14,15,16}		65/ <50 ^{14,15}	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
					<4014,13,10	<4014,13,10		<50							
00/10/10/2	25.00	00.00	11 41		<42 ¹⁶ /	<42 ¹⁶ /		<50/	.50	-0.5	-O F	٠٥. 5	-O F	-0.5	
03/12/13 ¹²	35.23	23.82	11.41		<4214,15,16	<4214,15,16		<5014,15	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
								<50/							
06/11/13 ¹²	35.23	23.14	12.09		<42 ¹⁶	<42 ¹⁶		<50 ^{14,15}	<50	< 0.5	< 0.5	<0.5	< 0.5	<0.5	
09/10/13 ¹²	35.23	22.53	12.70		<38 ¹⁶	<38 ¹⁶		<50/	<50	<0.5	<0.5	<0.5	< 0.5	<0.5	
07710710	00.20	22.00	.2., 0		-00	-00		<50 ^{14,15}		0.0	0.0	0.0	0.0	0.0	
10/0//10/2	25.00	00.70	10.70		-0016	-0016		<50/	.50	-0.5	-O F	٠٥. 5	-O F	-0.5	
12/04/13 ¹²	35.23	22.63	12.60		<38 ¹⁶	<38 ¹⁶		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
								<50/							
02/07/14 ²⁵	35.23	22.95	12.28		<40 ¹⁶	<40 ¹⁶		<50 ^{14,15}	<50	< 0.5	< 0.5	<0.5	< 0.5		
0.4.05.41.4	05.00		'00IDI E												
06/25/14	35.23	NOT ACCE													
08/29/14 ²⁵	35.23	21.48	13.75		<39 ^{14,15,16}	<39 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
12/12/14 ²⁵	35.23	24.85	10.38		<38 ^{14,15,16}	<38 ^{14,15,16}		<5014,15	<50	<0.5	<0.5	< 0.5	< 0.5		
06/01/15 ²⁵	35.23	23.00	12.23					<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/23/15 ²⁵	35.23	21.63	13.60					<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/23/15	33.23	∠1.03	13.60					<50	< 30	<0.5	<0.5	<0.5	<0.5		

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	В	T	E	X	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)
C-4 (cont)															
04/07/16 ²⁵	35.23	24.43	10.80					<50 ^{14,15}	<50	< 0.5	< 0.5	< 0.5	< 0.5		
02/08/17 ²⁵	35.23	26.55	8.68					<50 ^{14,15}	<50	< 0.5	<0.5	<0.5	<0.5		
10/27/17 ²⁵	35.23	22.69	12.54					<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
C-5															
06/06/89									<50	< 0.05	< 0.05	<1.0	<3.0		
12/08/89									<500	< 0.5	< 0.5	< 0.5	< 0.5		
09/07/90	35.31	20.21	15.10						<50	< 0.5	< 0.5	< 0.5	< 0.5		
12/20/90	35.31	20.37	14.94						80	<0.5	< 0.5	< 0.5	< 0.5		
03/06/91	35.31	22.25	13.06						<50	<0.5	< 0.5	< 0.5	< 0.5		
06/28/91	35.31	21.85	13.46						<50	< 0.5	< 0.5	< 0.5	< 0.5		
09/26/91	35.31	20.17	15.14						<50	<0.5	< 0.5	<0.5	<0.5		
01/27/92	35.31	22.00	13.31						<50	<0.5	<0.5	<0.5	<0.5		
04/20/92	35.31	24.21	11.10						<50	<0.5	<0.5	<0.5	<0.5		
07/17/92	35.31	21.58	13.73						<50	<0.5	<0.5	<0.5	<0.5		
10/29/92	35.31	20.11	15.20						<50	<0.5	<0.5	<0.5	<0.5		
01/20/93	35.31	24.59	10.72						<50	<0.5	<0.5	<0.5	<0.5		
05/03/93	35.31	24.88	10.43						<50	<0.5	<0.5	<0.5	<1.5		
07/28/93	35.31	23.50	11.81						<50	<0.5	<0.5	<0.5	<1.5		
10/27/93	34.61	21.93	12.68						<50	<0.5	<0.5	<0.5	<1.5		
03/31/94	34.61	23.61	11.00 ¹						<50	<0.5	<0.5	<0.5	<0.5		
06/08/94	34.61	23.35	11.26						<50	<0.5	< 0.5	<0.5	<0.5		
09/29/94 ²	34.61	21.51	13.10						<2,500	<25	<25	<25	<25		
11/09/94 ⁵	34.61								<50	<0.5	< 0.5	<0.5	<0.5		
12/14/94	34.61	23.24	11.37						<50	< 0.5	< 0.5	<0.5	< 0.5		
03/30/95	34.61	25.64	8.97						<50	< 0.5	<0.5	<0.5	<0.5		
06/30/95	34.61	23.78	10.83						<50	< 0.5	< 0.5	< 0.5	< 0.5		
09/22/95	34.61	22.72	11.89						<50	< 0.5	< 0.5	< 0.5	< 0.5		
12/11/95	34.61	22.83	11.78						<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
03/08/96	34.61	25.59	9.02						<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	
06/21/96	34.61	23.97	10.64						<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	
09/27/96	34.61	23.04	11.57						<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	
01/03/97	34.61	25.59	9.02						<50	0.7	3.2	< 0.5	2.2	<5.0	
03/28/97	34.61	24.23	10.38						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
NOT MONITORE	D/SAMPLED														
03/20/12 ¹³	34.61	24.00	10.61												
03/23/12 ¹²	34.61	23.94	10.67					<50/<50 ¹⁴	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/04/12 ¹²	34.61	23.01	11.60		<41 ¹⁶ / <41 ^{14,15,16}	<41 ¹⁶ / <41 ^{14,15,16}		55/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/07/12 ¹²	34.61	24.35	10.26		350 ¹⁶ / <40 ^{14,15,16}	350 ¹⁶ / <40 ^{14,15,16}		99/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	

					LNAPL			TPH								
C-5 (cont) (3/12/13) ² 34.61 23.80 10.81 -	ELL ID/		GWE	DTW		TOTAL TPH	TPH-MO	C13-C40		TPH-GRO	В	T	E	X	MtBE	HVOCs
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	TE	(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	5 (cont)															
09/10/13 ¹² 34.61 22.51 12.10 - 381 ¹⁶ 381 ¹⁶ - 400 ¹⁶ - 500/13 5 50 40.5 40.5 40.5 40.5 40.5 40.5 40.5	/12/13 ¹²	34.61	23.80	10.81		<41 ¹⁶ / <41 ^{14,15,16}			<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/10/13 34.61 22.51 12.10 - - - - - - - - -	/11/13 ¹²	34.61	23.16	11.45		<4016	<40 ¹⁶			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/04/13° 34.61 22.99 11.62 - < 485° 485° - < 500/415 < 50 < 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 < 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 < 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 < 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 < 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 < 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 < 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 < 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 < 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 < 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 < 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 < 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 < 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 < 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 < 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 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	/10/13 ¹²	34.61	22.51	12.10		<38 ¹⁶	<38 ¹⁶			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
	/04/13 ¹²	34.61	22.67	11.94		<38 ¹⁶	<38 ¹⁶			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	/07/14 ²⁵	34.61	22.99	11.62		<45 ¹⁶	<45 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	/25/14 ²⁵	34.61	22.77	11.84				<49	<50 ^{14,15}	<50	< 0.5	<0.5	<0.5	<0.5		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		34.61	21.98	12.63		<4014,15,16	<40 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		34.61	24.98	9.63						<50	<0.5	<0.5	<0.5	<0.5		
10/23/15 ²⁵	•		23.00	11.61						<50	<0.5	<0.5	<0.5			
04/07/16 ²³ 34.61 24.33 10.28 <50 ^{14.15} <50 <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 <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 <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 <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 <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 <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 <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 <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 <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 <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 <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 <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 <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 <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 <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 <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 <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 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5																
02/08/17 ²⁵ 34.61 26.61 8.00																
C-6 10/27/17 ²⁸ 34.61 22.71 11.90 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><50^{14,15}</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									<50 ^{14,15}							
12/08/89 57 <0.5 <0.5 <0.6 4.0 12/20/90 36.89 20.23 16.66 <50	/00/17 / 27/17 ²⁵								< 50 ^{14,15}							
12/08/89 57 <0.5 <0.5 <0.6 4.0 12/20/90 36.89 20.23 16.66 <50	4															
09/07/90 36.89 20.06 16.83										<500	< 0.5	< 0.5	< 0.5	< 0.5		
03/06/91 36.89 22.09 14.80		36.89	20.06	16.83												
06/28/91 36.89 21.73 15.16																
09/26/91 36.89 20.07 16.82	/06/91	36.89	22.09	14.80						<50	< 0.5	< 0.5	< 0.5	< 0.5		
01/27/92 36.89 21.45 15.44	/28/91	36.89	21.73	15.16						<50	< 0.5	< 0.5	<0.5	< 0.5		
04/20/92 36.89 23.72 13.17	/26/91	36.89	20.07	16.82						<50	<0.5	< 0.5	< 0.5	< 0.5		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	/27/92	36.89	21.45	15.44						<50	<0.5	< 0.5	<0.5	< 0.5		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				13.17												
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$09/29/94^2$ 36.57 21.69 14.88 <2,500 <25 <25 <25 <25 $11/09/94^5$ 36.57 <50 <0.5 <0.5 <0.5																
11/09/94 ⁵ 36.57 <50 <0.5 <0.5 <0.5																
	/29/94 ²	36.57	21.69	14.88						<2,500	<25	<25	<25	<25		
10/1/04	/09/94 ⁵	36.57								<50	<0.5	0.5	<0.5	<0.5		
12/14/94 36.57 23.58 12.99 <50 0.9 1.5 1.3 2.6	/14/94	36.57	23.58	12.99						<50	0.9	1.5	1.3	2.6		
03/30/95 36.57 25.80 10.77 <50 <0.5 <0.5 <0.5	/30/95	36.57	25.80	10.77						<50	<0.5	<0.5	<0.5	<0.5		

				LNAPL			TPH			-					
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	B	T (::= (!)	E	X	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
C-6 (cont)															
06/30/95	36.57	23.95	12.62						<50	<0.5	<0.5	<0.5	<0.5		
09/22/95	36.57	22.92	13.65						<50	<0.5	<0.5	<0.5	<0.5		
12/11/95	36.57	22.89	13.68						140 ⁸	<0.5	<0.5	<0.5	<0.5	<0.5	
03/08/96	36.57	25.84	10.73						<50	<0.5	0.6	<0.5	<0.5	<5.0	
06/21/96 09/27/96	36.57	24.16	12.41						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
01/03/97	36.57 36.57	23.10 25.57	13.47 11.00						<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<5.0 <5.0	
03/28/97	36.57	23.57	12.06						<50 <50	<0.5	<0.5	<0.5	<0.5	<5.0 <5.0	
NOT MONITORE		24.51	12.00						\ 50	٧٥.5	٧٥.5	٧٥.5	٧٥.٥	٧٥.٥	
03/20/12 ¹³	36.57	24.02	12.55												
03/23/12 ¹²	36.57	23.99	12.58					<50/<50 ¹⁴	<50	<0.5	1	<0.5	<0.5	<0.5	
09/04/12 ¹²	36.57	22.99	13.58		<40 ¹⁶ / <40 ^{14,15,16}	<40 ¹⁶ / <40 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/07/12 ¹²	36.57	24.30	12.27		<38 ¹⁶ / <38 ^{14,15,16}	<38 ¹⁶ / <38 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/12/13 ¹²	36.57	23.84	12.73		<40 ¹⁶ / <40 ^{14,15,16}	<40 ¹⁶ / <40 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
06/11/13 ¹²	36.57	23.19	13.38		<40 ¹⁶	<40 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/10/13 ¹²	36.57	22.55	14.02		<38 ¹⁶	<38 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/04/13 ¹²	36.57	22.64	13.93		<38 ¹⁶	<38 ¹⁶		500/ 510 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/07/14 ²⁵	36.57	22.96	13.61		<40 ¹⁶	<40 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/25/14 ²⁵	36.57	22.80	13.77		<50		<50	<5014,15	<50	<0.5	<0.5	<0.5	< 0.5		
08/29/14 ²⁵	36.57	22.00	14.57		<40 ^{14,15,16}	<4014,15,16		<5014,15	<50	<0.5	< 0.5	<0.5	<0.5		
12/12/14 ²⁵	36.57	24.64	11.93		<39 ^{14,15,16}	<39 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/01/15 ²⁵	36.57	23.01	13.56					<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/23/15 ²⁵	36.57	21.54	15.03					<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
								<3U							
04/07/16 ²⁵	36.57	24.43	12.14					<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
02/08/17 ²⁵	36.57 36.57	26.27 22.59	10.30 13.98	 	 		 	<50 ^{14,15}	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5		
10/27/17 ²⁵	30.37	22.37	13.70					<50''''	\3 U	\0.5	\U. 5	\U. 5	\U. 5		
C-7 12/08/89									1,700	32	12	17	150		_
09/07/90	32.75	19.73	13.02						880	32 84	23	46	180		
12/20/90	32.75	20.47	12.28						560	24	3.0	19	21		
03/06/91	32.75	15.83	16.92						240	25	2.0	4.0	26		
03/06/91	32.75	15.83	16.92						240	25	2.0	4.0	26		

					LNAPL			TPH								
WELL ID/		TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	В	T	E	Х	MtBE	HVOCs
DATE		(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
C-7 (cont)																
06/28/91		32.75	21.44	11.31						2,400	130	13	82	220		
09/26/91		32.75	20.47	12.28						8,100	47	35	350	1,200		
01/27/92		32.75	21.32	11.43						12,000	170	40	420	830		
04/20/92		32.75	23.47	9.28						1,200	80	11	90	110		
07/17/92		32.75	21.26	11.49						2,400	20	7.4	95	200		
10/29/92		32.75	19.70	13.05						69	1.3	< 0.5	3.8	7.2		
01/20/93		32.75	24.06	8.69						<50	< 0.5	< 0.5	< 0.5	< 0.5		
05/03/93		32.75	24.07	8.68						2,400	29	8.6	140	210		
07/28/93		32.75	22.76	9.99						3,600	38	16	290	920		
10/27/93		32.32	21.60	10.72						22,000	23	26	990	2,600		
03/31/94		32.32	23.21	9.11						2,300	45	7.0	130	190		
06/08/94		32.32	23.10	9.22						6,900	46	11	380	820		
09/29/94		32.32	21.00	11.32						11,000	10	11	620	810		
11/09/94 ⁵		32.32								7,800	33	18	570	1,100		
12/14/94		32.32	23.33	8.99						7,700	63	16	140	1,200		
03/30/95		32.32	25.04	7.28						4,100	64	18	170	280		
06/30/95		32.32	23.25	9.07						1,200	31	3.7	21	18		
09/22/95		32.32	22.27	10.05						1,800	64	5.7	30	38		
12/11/95		32.32	23.02	9.30						14,000	80	6.1	91	120	70	
03/08/96		32.32	24.99	7.33						2,300	57	8.4	110	180	37	
06/21/96		32.32	23.47	8.85						1,100	37	3.2	21	29	9.0	
09/27/96		32.32	23.21	9.11						10,000	150	30	270	670	45	
01/03/97		32.32	24.83	7.49						1,800	35	<0.5	34	72	15	
03/28/97		32.32	23.75	8.57						2,200	38	4.1	31	56	19	
09/30/97		32.32	MONITORE	D ANNUALL	Υ.											
03/28/98		32.32	24.98	7.34						2,100 ⁸	28	7.8	70	170	<25	
03/19/99		32.32	24.61	7.71						5,300	63	24	280	370	67 ¹⁰	
03/21/00		32.32	24.57	7.75						2,830	19.5	5.14	116	206	11.7	
08/28/00		32.32	MONITORE	D/SAMPLED	ANNUALLY											
03/02/01		32.32	24.06	8.26	0.00					7,62011	54.7	<25.0	522	945	<250	
09/04/01		32.32			ANNUALLY											
03/21/02		32.32	24.10	8.22	0.00					9,300	31	8.4	460	850	<20	
09/04/02		32.32	MONITORE	D/SAMPLED	ANNUALLY											
03/31/03		32.32	23.67	8.65	0.00					3,300	17	3.9	92	190	31	
09/17/03	t	32.80	MONITORE	D /SAMPLEI	D ANNUALLY											
03/05/04 ¹²		32.80	24.86	7.94	0.00					2,200	7	1	50	120	<0.5	
09/03/04		32.80		D /SAMPLE	D ANNUALLY											
03/02/05 ¹²		32.80	25.14	7.66	0.00					2,500	11	2	39	84	<0.5	
09/02/05		32.80			D ANNUALLY											
03/24/06 ¹²		32.80	25.44	7.36	0.00					3,300	12	3	 56	100	<0.5	
03/05/07 ¹²		32.80	24.46	8.34	0.00					1,600	5	8.0	13	30	<0.5	
03/17/08 ¹²		32.32	23.69	8.63	0.00					750	2	<0.5	4	12	<0.5	
03/03/09 ¹²		32.32	23.88	8.44	0.00					<50	<0.5	< 0.5	<0.5	<0.5	<0.5	

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	B	T	E	X	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
C-7 (cont)															
03/17/10 ¹²	32.32	24.21	8.11	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/04/11 ¹²	32.32	23.18	9.14	0.00					<50	<0.5	<0.5	0.6	<0.5	<0.5	
03/23/12 ¹²	32.32	23.42	8.90	0.00				<50/<50 ¹⁴	<50	<3	<3	<3	<3	<3	
09/04/12 ¹²	32.32	22.49	9.83	0.00	48 ¹⁶ / <40 ^{14,15,16}	48 ¹⁶ / <40 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/07/12 ¹²	32.32	23.77	8.55	0.00	140 ¹⁶ / <40 ^{14,15,16}	140 ¹⁶ / <40 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/12/13 ¹²	32.32	23.31	9.01	0.00	<40 ¹⁶ / <40 ^{14,15,16}	<40 ¹⁶ / <40 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
06/11/13 ¹²	32.32	22.71	9.61	0.00	<40 ¹⁶	<40 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/10/13 ¹²	32.32	22.04	10.28	0.00	<3816	<38 ¹⁶		71/ 61 ^{14,15}	87	<0.5	<0.5	3	<0.5	<0.5	
12/04/13 ¹²	32.32	22.17	10.15	0.00	<38 ¹⁶	<38 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/07/14 ²⁵	32.32	22.55	9.77	0.00	<40 ¹⁶	<40 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/25/14 ²⁵	32.32	22.27	10.05	0.00	<52		<52	<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
08/29/14 ²⁵	32.32	21.54	10.78	0.00	<40 ^{14,15,16}	<40 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
12/12/14 ²⁵	32.32	24.08	8.24	0.00	<3814,15,16	<38 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/01/15 ²⁵	32.32	22.60	9.72	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/23/15 ²⁵	32.32	21.20	11.12	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
04/07/16 ²⁵	32.32	23.99	8.33	0.00				27014,15	2,100	<3	<3	8	<3		
02/08/17 ^{25,26}	32.32	25.69	6.63	0.00				600 ^{14,15}	3,200	1	<0.5	41	1		
10/27/17 ^{25,26}	32.32	22.15	10.17	0.00				94 ^{14,15}	410	<0.5	<0.5	<0.5	<0.5		
C-8															
12/08/89									4,800	62	11	95	180		
09/07/90	33.82	19.50	14.32						3,700	170	31	180	270		
12/20/90	33.82	19.61	14.20						3,900	120	20	130	180		
03/06/91	33.82	19.02	14.80						1,200	45	6.0	34	57		
06/28/91	33.82	21.17	12.65						6,900	180	46	340	640		
09/26/91	33.82	19.53	14.29						1,400	66	9.8	38	40		
01/27/92	33.82	21.22	12.60						3,600	100	26	170	260		
04/20/92	33.82	23.46	10.36						2,600	110	32	180	260		
07/17/92	33.82	20.94	12.88						1,100	34	5.9	35	52		
10/29/92 01/20/93	33.82 33.82	19.43 23.80	14.39 10.02						820 6,000	29 81	4.8 22	23 200	27 310		
05/03/93	33.82	23.80	9.75						11,000	75	22 96	200 880	2,600		
07/28/93	33.82	22.68	11.14						2,800	60	13	92	150		

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	В	T	E	X	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)
C-8 (cont)															
10/27/93	33.25	21.24	12.01						2,700	49	17	60	90		
03/31/94	33.25	22.98	10.27						190	8.6	1.7	9.1	11		
06/08/94	33.25	22.69	10.56						2,800	52	110	78	110		
09/29/94	33.25	20.83	12.42						3,700	120	20	120	85		
11/09/94 ⁵	33.25								3,200	82	44	160	110		
12/14/94	33.25	22.74	10.51						5,300	140	30	170	310		
03/30/95	33.25	24.81	8.44						3,900	86	19	180	210		
06/30/95	33.25	23.11	10.14						1,500	75	21	72	72		
09/22/95	33.25	22.05	11.20						3,400	94	24	110	110		
12/11/95	33.25	22.26	10.99						7,500	100	<0.5	160	120	130	
03/08/96	33.25	24.79	8.46						3,600	93	8.9	110	88	82	
06/21/96	33.25	23.28	9.97						3,200	69	6.8	100	88	19	
09/27/96	33.25	22.47	10.78						7,000	98	12	150	130	53	
01/03/97	33.25	24.43	8.82						5,700	43	9.3	110	95	17	
03/28/97	33.25	23.60	9.65						4,900	52	4.7	70	47	50	
09/30/97	33.25	MONITORE		Υ.											
03/28/98	33.25	24.78	8.47						3,300 ⁸	33	4.2	110	61	<25	
03/19/99	33.25	24.34	8.91						2,600	34	16	34	19	76 ¹⁰	
03/21/00	33.25	24.43	8.82						4,300	8.45	42.3	61.1	20.3	33.8	
08/28/00	33.25	MONITORE	D/SAMPLED	ANNUALLY											
03/02/01	33.25	23.75	9.50	0.00					2,98011	37.4	4.12	22.3	11.3	40.4	
09/04/01	33.25	MONITORE	D/SAMPLED	ANNUALLY											
03/21/02	33.25	23.86	9.39	0.00					3,500	<20	2.0	15	8.3	<10	
09/04/02	33.25	MONITORE	D/SAMPLED	ANNUALLY											
03/31/03	33.25	23.45	9.80	0.00					4,700	<20	2.1	22	11	<50	
09/17/03 t	32.80	MONITORE) /SAMPLEI	D ANNUALLY											
03/05/04 ¹²	32.80	23.70	9.10	0.00					5,500	3	2	58	17	< 0.5	
09/03/04	32.80	MONITORE) /SAMPLEI	D ANNUALLY											
03/02/05 ¹²	32.80	23.94	8.86	0.00					3,300	1	0.8	17	9	<0.5	
09/02/05	32.80			D ANNUALLY											
03/24/06 ¹²	32.80	25.13	7.67	0.00					4,000	0.9	0.7	18	8	<0.5	
03/05/07 ¹²	32.80	23.26	9.54	0.00					8,100	1	1	66	19	<0.5	
03/17/08 ¹²	33.25	23.45	9.80	0.00					8,800	2	1	62	18	<0.5	
03/03/09 ¹²	33.25	23.52	9.73	0.00					7,400	0.8	0.7	56	11	< 0.5	
03/17/10 ¹²	33.25	23.98	9.27	0.00					8,700	1	0.8	51	11	<0.5	
03/04/11 ¹²	33.25	23.32	9.93	0.00					8,900	1	0.6	37	8	<0.5	
03/04/11	33.23	23.32	7.70	0.00					0,700	ı	0.0	3/	O	\0. 3	
03/23/12 ¹²	33.25	23.06	9.93	0.00				2,900/ 2,000 ¹⁴	8,900	0.8	5	33	0.5	<0.5	
09/04/12 ¹²	33.25	22.19	11.06	0.00	59 ¹⁶ / <40 ^{14,15,16}	59 ¹⁶ / <40 ^{14,15,16}		3,000/ 2,800 ^{14,15,18}	11,000	1	0.5	35	4	<0.5	

				LNAPL			TPH								
WELL ID/ DATE	TOC (ff.)	GWE (msl)	DTW (ff.)	Thickness (ft.)	TOTAL TPH (µg/L)	TPH-MO (µg/L)	C13-C40 (µg/L)	TPH-DRO (μg/L)	TPH-GRO (μg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	MtBE (µg/L)	HVOCs (µg/L)
C-8 (cont)															
12/07/12 ¹²	33.25	23.45	9.80	0.00	65 ¹⁶ / <41 ^{14,15,16}	65 ¹⁶ / <41 ^{14,15,16}		3,100/ 3,000 ^{14,15}	7,800	<5 ²¹	<5 ²¹	26 ²¹	<5 ²¹	<5 ²¹	
03/12/13 ¹²	33.25	23.07	10.18	0.00	<42 ¹⁶ / <42 ^{14,15,16}	<42 ¹⁶ / <42 ^{14,15,16}		2,200/ 1,800 ^{14,15}	8,300	<5	<5	21	<5	<5	
06/11/13 ¹²	33.25	22.45	10.80	0.00	<40 ¹⁶	<40 ¹⁶		3,000/ 2,000 ^{14,15}	7,800	0.6	<0.5	31	4	<0.5	
09/10/13 ¹²	33.25	21.75	11.50	0.00	<38 ^{16,24}	<38 ^{16,24}		2,900/ 2,700 ^{14,15}	10,000 ²¹	<1 ²¹	1 ²¹	26 ²¹	5 ²¹	<1 ²¹	
12/04/13 ¹²	33.25	21.85	11.40	0.00	<38 ^{16,24}	<38 ^{16,24}		3,500/ 2,600 ^{14,23}	8,900	<0.5	<0.5	28	3	<0.5	
02/07/14 ²⁵	33.25	22.17	11.08	0.00	52 ^{16,24}	5216,24		2,600/ 2,300 ^{14,15}	9,100	0.8	0.5	27	3		
06/25/14 ²⁵	33.25	21.99	11.26	0.00	570		570	2,100 ^{14,15}	9,100	0.8	< 0.5	26	3		
08/29/14 ^{25,26}					<38 ^{14,15,16}	<3814,15,16		2,800 ^{14,15}	6,800	0.5	<0.5	18	2		
08/29/14 ²⁵	33.25	21.24	12.01	0.00	<38 ^{14,15,16}	<38 ^{14,15,16}		2,400 ^{14,15}	8,600	0.7	<0.5	21	2		
12/12/14 ^{25,26}					<39 ^{14,15,16}	<39 ^{14,15,16}		1,200 ^{14,15}	6,300	0.7	<0.5	12	2		
12/12/14 ²⁵	33.25	23.65	9.60	0.00	<38 ^{14,15,16}	<38 ^{14,15,16}		1,700 ^{14,15}	7,600	<1 ²¹	<1 ²¹	18 ²¹	2 ²¹		
06/01/15 ^{25,26}								1,700	7,300	<3	<3	16	<3		
	33.25	22.34	10.91	0.00				1,800 ^{14,15}		10	<3	29	11		
06/01/15 ²⁵	22.05	00.07	10.00	0.00					7,300						
10/23/15 ^{25,26}	33.25	20.86	12.39	0.00				2,400 ^{14,15}	9,100	<3	<3	9	<3		
04/07/16 ^{25,26}	33.25	23.77	9.48	0.00				1,800 ^{14,15}	9,900	<5	<5	11	<5		
02/08/17 ^{25,26}	33.25 33.25	25.10 21.80	8.15	0.00				860 ^{14,15}	5,000	<0.5	0.6 0.7	7 9	0.7 1		
10/27/17 ^{25,26}	33.25	21.80	11.45	0.00				1,600 ^{14,15}	7,400	0.6	0.7	4	ı		
C-9 09/07/90	33.43	19.37	14.06						<50	<0.5	<0.5	<0.5	<0.5		
12/20/90	33.43	19.40	14.03						<50	<0.5	<0.5	<0.5	<0.5		
03/06/91	33.43	21.31	12.12						<50	<0.5	<0.5	<0.5	<0.5		
06/28/91	33.43	21.02	12.41						<50	<0.5	<0.5	<0.5	<0.5		
09/26/91	33.43	19.41	14.02						<50	< 0.5	< 0.5	< 0.5	< 0.5		
01/27/92	33.43	20.90	12.53						<50	<0.5	< 0.5	< 0.5	< 0.5		
04/20/92	33.43	23.21	10.22						<50	< 0.5	<0.5	<0.5	<0.5		
07/17/92	33.43	20.79	12.64						<50	<0.5	<0.5	<0.5	<0.5		
10/29/92	33.43	19.23	14.20						<50	<0.5	<0.5	<0.5	<0.5		
01/20/93	33.43	23.71	9.72						<50	<0.5	<0.5	<0.5	<0.5		
05/03/93	33.43	23.66	9.55						<50	<0.5	<0.5	<0.5	<1.5		
07/28/93	33.43	22.45	10.98						<50	<0.5	<0.5	<0.5	<1.5		
10/27/93	32.97	20.99	11.98						<50	<0.5	<0.5	<0.5	<1.5		
03/31/94	32.97	22.80	10.17						<50	<0.5	<0.5	<0.5	<0.5		

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	В	T	E	X	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
C-9 (cont)															
06/08/94	32.97	22.44	10.53						<50	< 0.5	< 0.5	<0.5	<0.5		
09/29/942	32.97	20.57	12.40						<5,000	<50	<50	<50	<50		
11/09/94 ⁵	32.97								<50	<0.5	<0.5	<0.5	0.7		
12/14/94	32.97	22.48	10.49						69	1.1	2.2	3.4	7.8		
03/30/95	32.97	24.77	8.20						<50	<0.5	<0.5	<0.5	<0.5		
06/30/95	32.97	23.00	9.97						<50	<0.5	<0.5	<0.5	<0.5		
09/22/95	32.97	21.90	11.07						<50	<0.5	<0.5	<0.5	<0.5		
12/11/95	32.97	21.89	11.08						<50	<0.5	<0.5	<0.5	<0.5	< 0.5	
03/08/96	32.97	24.77	8.20						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
06/21/96	32.97	23.16	9.81						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
09/27/96	32.97	22.06	10.91						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
01/03/97	32.97	24.30	8.67						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/28/97	32.97	23.50	9.47						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
09/30/97	32.97	21.36	11.61						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/28/98	32.97	24.71	8.26						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
09/08/98	32.97	22.73	10.24						<50	5.7	1.4	1.4	1.8	4.9	
03/19/99	32.97	24.27	8.70						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
09/21/99	32.97	22.00	10.97						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/21/00	32.97	24.38	8.59						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
08/28/00	32.97	22.02	10.95	0.00					<50	<0.50	<0.50	<0.50	<0.50	<2.5	
03/02/01	32.97	23.57	9.40	0.00					<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	
09/04/01	32.97	21.66	11.31	0.00					<50	<0.50	<0.50	<0.50	<1.5	<2.5	
03/21/02	32.97	23.72	9.25	0.00					<50	<0.50	<0.50	<0.50	<1.5	<2.5	
09/04/02	32.97	21.93	11.04	0.00					<50	<0.50	<0.50	<0.50	<1.5	<2.5	
03/31/03	32.97	23.29	9.68	0.00					<50	<0.5	<0.5	<0.5	<1.5	<2.5	
09/17/03 ¹²	32.97	21.99	10.98	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/05/04 ¹²	32.97	24.07	8.90	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/03/04 ¹²	32.97	21.54	11.43	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/02/05 ¹²	32.97	24.24	8.73	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/02/05 ¹²	32.97	22.38	10.59	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/24/06	32.97	24.30	8.67	0.00											
03/05/07	32.97	23.49	9.48	0.00											
03/17/08	32.97	23.27	9.70	0.00											
03/03/09	32.97	23.37	9.60	0.00											
03/17/10	32.97	23.83	9.14	0.00											
03/04/11	32.97	23.71	9.26	0.00											
03/20/12 ¹³	32.97	22.93	10.04	0.00											
03/23/12 ¹²	32.97	22.94	10.03	0.00				<50/<50 ¹⁴	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
					55 ¹⁶ /	55 ¹⁶ /		<50/							
09/04/12 ¹²	32.97	21.94	11.03	0.00	<40 ^{14,15,16}	<40 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/07/12 ¹²	32.97	23.17	9.80	0.00	43 ¹⁶ / <41 ^{14,15,16}	43 ¹⁶ / <41 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	

WELL ID/ DATE		TOC (#.)	GWE (msl)	DTW (ft.)	LNAPL Thickness (ft.)	TOTAL TPH	TPH-MO (µg/L)	TPH C13-C40 (µg/L)	TPH-DRO (μg/L)	TPH-GRO (μg/L)	B (µg/L)	Τ (μg/L)	Ε (μg/L)	Χ (μg/L)	MtBE (μg/L)	HVOCs (µg/L)
C-9 (cont)																
03/12/13 ¹²		32.97	22.87	10.10	0.00	<40 ¹⁶ / <40 ^{14,15,16}	<40 ¹⁶ / <40 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
06/11/13 ¹²		32.97	22.22	10.75	0.00	<42 ¹⁶	<42 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/10/13 ¹²		32.97	21.47	11.50	0.00	<38 ¹⁶	<38 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/04/13 ¹²		32.97	21.59	11.38	0.00	<38 ¹⁶	<38 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/07/14 ²⁵		32.97	21.82	11.15	0.00	<40 ¹⁶	<40 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/25/14 ²⁵		32.97	21.76	11.21	0.00	<48		<48	< 5014,15	<50	<0.5	<0.5	<0.5	<0.5		
08/29/14 ²⁵		32.97	20.96	12.01	0.00	<38 ^{14,15,16}	<38 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
12/12/14 ²⁵		32.97	23.42	9.55	0.00	<38 ^{14,15,16}	<38 ^{14,15,16}		< 5014,15	<50	<0.5	<0.5	<0.5	<0.5		
06/01/15 ²⁵		32.97	22.07	10.90	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/23/15 ²⁵		32.97	20.49	12.48	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
04/07/16 ²⁵		32.97	23.50	9.47	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
02/08/17 ²⁵		32.97	24.90	8.07	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/27/17 ²⁵		32.97	21.47	11.50	0.00				< 50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
C-10																
09/07/90		31.63	19.14	12.49						<50	<0.5	<0.5	<0.5	<0.5		
12/20/90		31.63	19.27	12.36						<50	<0.5	<0.5	<0.5	<0.5		
03/06/91		31.63	21.18	10.45						<50	<0.5	0.8	<0.5	0.8		
06/28/91		31.63	20.69	10.74						<50	<0.5	< 0.5	<0.5	<0.5		
09/26/91 01/27/92		31.63 31.63	19.21 20.79	12.42 10.84						<50 <50	<0.5 <0.5	<0.5 1.3	<0.5 <0.5	<0.5 <0.5		
01/27/72	(D)	31.63	20.77							<50	<0.5	1.3	<0.5	<0.5		
04/20/92	. ,	31.63	23.06	8.55						<50	<0.5	<0.5	<0.5	<0.5		
07/17/92		31.63	20.61	11.02						<50	<0.5	<0.5	<0.5	<0.5		
10/29/92		31.63	19.23	12.40						<50	< 0.5	< 0.5	< 0.5	< 0.5		
01/20/93		31.63	23.49	8.14						<50	< 0.5	< 0.5	<0.5	< 0.5		
05/03/93		31.63	23.71	7.92						<50	<0.5	<0.5	<0.5	<1.5		
07/28/93		31.63	22.27	9.36						<50	<0.5	<0.5	<0.5	<1.5		
10/27/93		31.16	20.86	10.30						<50	<0.5	<0.5	<0.5	<1.5		
03/31/94		31.16	22.71	8.45						<50	<0.5	<0.5	<0.5	<0.5		
06/08/94		31.16	22.31	8.85						<50	<0.5	<0.5	<0.5	<0.5		
09/29/94 ²		31.16	20.46	10.70						<5,000	<50	<50	<50	<50		
11/09/94 ⁵		31.16								<50	<0.5	1.4	0.8	1.2		
12/14/94		31.16	22.55	8.61						110	3.9	5.4	4.3	11		

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	В	T	E	X	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)
C-10 (cont)															
03/30/95	31.16	24.51	6.65						<50	<0.5	<0.5	<0.5	<0.5		
06/30/95	31.16	22.86	8.30						<50	1.5	1.5	< 0.5	2.2		
09/22/95	31.16	21.75	9.41						<50	< 0.5	< 0.5	< 0.5	< 0.5		
12/11/95	31.16	21.89	9.27						<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
03/08/96	31.16	24.53	6.63						<50	< 0.5	< 0.5	< 0.5	0.5	<5.0	
06/21/96	31.16	23.04	8.12						<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	
09/27/96	31.16	21.95	9.21						<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	
01/03/97	31.16	23.84	7.32						<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	
03/28/97	31.16	23.34	7.82						<50	1.2	1.8	< 0.5	0.8	<5.0	
09/30/97	31.16	21.34	9.82						<250 ⁹	<2.5	<2.5	<2.5	<2.5	<25	
03/28/98	31.16	24.60	6.56						<50	<0.5	0.52	<0.5	<0.5	<2.5	
09/08/98	31.16	22.65	8.51						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
03/19/99	31.16	24.00	7.16						<50	<0.5	<0.5	<0.5	<0.5	9.2 ¹⁰	
09/21/99	31.16	21.87	9.29						<50	<0.5	<0.5	<0.5	<0.5	6.38	
03/21/99	31.16	24.54	6.62						<50	<0.5	<0.5	<0.5	<0.5	10.6	
08/28/00	31.16	21.86	9.30	0.00					<50	<0.50	<0.50	<0.50	<0.50	7.7	
03/02/01	31.16	23.41	7.75	0.00					<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	
09/04/01	31.16	21.54	9.62	0.00					<50	<0.50	<0.50	<0.50	<1.5	<2.5	
03/21/02	31.16	23.56	7.60	0.00					<50	< 0.50	< 0.50	<0.50	<1.5	<2.5	
09/04/02	31.16	21.76	9.40	0.00					<50	<0.50	< 0.50	<0.50	<1.5	<2.5	
03/31/03	31.16	23.14	8.02	0.00					<50	<0.5	<0.5	<0.5	<1.5	<2.5	
09/17/03 ¹²	31.16	21.85	9.31	0.00					<50	<0.5	<0.5	<0.5	<0.5	0.8	
03/05/04 ¹²	31.16	23.88	7.28	0.00					<50	<0.5	<0.5	<0.5	<0.5	0.5	
09/03/04 ¹²	31.16	21.50	9.66	0.00					<50	<0.5	<0.5	<0.5	<0.5	< 0.5	
03/02/05 ¹²	31.16	24.08	7.08	0.00					<50	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	
09/02/05 ¹²	31.16	22.35	8.81	0.00					<50	<0.5	< 0.5	<0.5	<0.5	<0.5	
03/24/06	31.16	23.54	7.62	0.00											
03/05/07	31.16	23.39	7.77	0.00											
03/17/08	31.16	21.56	9.60	0.00											
03/03/09	31.16	23.26	7.90	0.00											
03/17/10	31.16	23.69	7.47	0.00											
03/04/11	31.16	22.84	8.32	0.00											
03/20/12 ¹³	31.16	23.14	8.02	0.00											
								504.5014							
03/23/12 ¹²	31.16	22.85	8.31	0.00				<50/<50 ¹⁴	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/04/12 ¹²	31.16	21.84	9.32	0.00	<40 ¹⁶ / <40 ^{14,15,16}	<40 ¹⁶ / <40 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/07/12 ¹²	31.16	22.72	8.44	0.00	470 ¹⁶ /71 ^{14,15,16}	470 ¹⁶ / 71 ^{14,15,16}		150/ 64 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/12/13 ¹²	31.16	22.89	8.27	0.00	<42 ¹⁶ / <42 ^{14,15,16}	<42 ¹⁶ / <42 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	

				LNAPL			TPH								
WELL ID/ DATE	TOC (#.)	GWE (msl)	DTW (ff.)	Thickness (ft.)	TOTAL TPH (µg/L)	TPH-MO (μg/L)	C13-C40 (µg/L)	TPH-DRO (µg/L)	TPH-GRO (μg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	M†BE (µg/L)	HVOCs (µg/L)
	(11.)	(IIIsi)	(11.)	(11.)	(µg/L)	(μ9/1)	(μg/τ)	(μg/L)	(P9/L)	(μg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)
C-10 (cont)								.50/							
06/11/13 ¹²	31.16	22.14	9.02	0.00	<4116	<4116		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/10/13 ¹²	31.16	21.41	9.75	0.00	<39 ¹⁶	<39 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/04/13 ¹²	31.16	21.44	9.72	0.00	<38 ¹⁶	<38 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/07/14 ²⁵	31.16	21.78	9.38	0.00	<4016	<40 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/25/14 ²⁵	31.16	21.66	9.50	0.00	<50		<50	<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
08/29/14 ²⁵	31.16	21.14	10.02	0.00	<37 ^{14,15,16}	<37 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
12/12/14 ²⁵	31.16	23.26	7.90	0.00	<38 ^{14,15,16}	<38 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/01/15 ²⁵	31.16	22.02	9.14	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/23/15 ²⁵	31.16	20.45	10.71	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
04/07/16 ²⁵	31.16	23.48	7.68	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
02/08/17 ²⁵	31.16	24.74	6.42	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/27/17 ²⁵	31.16	21.43	9.73	0.00				< 50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
C-11															
09/07/90	31.58	19.36	12.22						<50	<0.5	<0.5	<0.5	<0.5		
12/20/90	31.58	19.50	12.08						<50	< 0.5	< 0.5	<0.5	< 0.5		
03/06/91	31.58	15.43	16.15						<50	< 0.5	< 0.5	< 0.5	< 0.5		
06/28/91	31.58	21.06	10.52						<50	<0.5	<0.5	<0.5	<0.5		
09/26/91	31.58	19.38	12.20						<50	<0.5	<0.5	<0.5	<0.5		
01/27/92	31.58	20.85	10.73						<50	<0.5	0.8	<0.5	<0.5		
04/20/92	31.58	23.02	8.56						<50	<0.5	<0.5	<0.5	<0.5		
07/17/92 10/29/92	31.58 31.58	20.80 19.51	10.78 12.07						<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5		
01/20/93	31.58	21.61	7.97						<50 <50	<0.5	<0.5	<0.5	<0.5		
05/03/93	31.58	23.63	7.77						<50	<0.5	<0.5	<0.5	<1.5		
07/28/93	31.58	22.27	9.31						<50	<0.5	<0.5	<0.5	<1.5		
10/27/93	31.23	21.06	10.17						<50	<0.5	<0.5	<0.5	<1.5		
03/31/94	31.23	22.80	8.43						<50	<0.5	<0.5	<0.5	<0.5		
06/08/94	31.23	22.47	8.76						<50	<0.5	<0.5	<0.5	<0.5		
09/29/94	31.23	20.69	10.54						<50	< 0.5	<0.5	< 0.5	< 0.5		
11/09/94									<50	< 0.5	0.6	<0.5	0.7		
12/14/94	31.23	22.73	8.50						51	1.1	1.7	1.6	4.0		

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	В	T	E	X	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)
C-11 (cont)															
03/30/95	31.23	24.38	6.85						<50	< 0.5	< 0.5	<0.5	<0.5		
06/30/95	31.23	22.89	8.34						<50	< 0.5	< 0.5	< 0.5	< 0.5		
09/22/95	31.23	21.93	9.30						<50	< 0.5	< 0.5	< 0.5	< 0.5		
12/11/95	31.23	22.22	9.01						<50	< 0.5	< 0.5	< 0.5	1.1	1.1	
03/08/96	31.23	24.33	6.90						<50	< 0.5	0.6	< 0.5	1.6	<5.0	
06/21/96	31.23	23.13	8.10						<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	
09/27/96	31.23	22.16	9.07						<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	
01/03/97	31.23	24.10	7.13						<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	
03/28/97	31.23	21.40	9.83						120	12	20	2.3	14	<5.0	
09/30/97	31.23	21.56	9.67						<50	0.7	0.8	< 0.5	0.6	<5.0	
03/28/98	31.23	24.40	6.83						<50	<0.5	<0.5	< 0.5	< 0.5	<2.5	
09/08/98	31.23	22.72	8.51						<50	< 0.5	< 0.5	<0.5	< 0.5	<2.5	
03/19/99	31.23	24.06	7.17						<50	<0.5	<0.5	< 0.5	< 0.5	<2.5	
09/21/99	31.23	22.02	9.21						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/21/00	31.23	24.13	7.10						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
08/28/00	31.23	22.04	9.19	0.00					<50	< 0.50	< 0.50	<0.50	<0.50	<2.5	
03/02/01	31.23	23.34	7.89	0.00					<50.0	<0.500	< 0.500	<0.500	< 0.500	<5.00	
09/04/01	31.23	21.78	9.45	0.00					<50	< 0.50	<0.50	<0.50	<1.5	<2.5	
03/21/02	31.23	23.66	7.57	0.00					<250	<1.0	<1.0	<1.0	<3.0	<2.5	
09/04/02	31.23	21.98	9.25	0.00					<50	<0.50	<0.50	<0.50	<1.5	<2.5	
03/31/03	31.23	23.26	7.97	0.00					<50	<0.5	<0.5	<0.5	<1.5	<2.5	
09/17/03 ¹²	31.23	22.04	9.19	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/05/04 ¹²	31.23	23.88	7.35	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/03/04 ¹²	31.23	21.74	9.49	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/02/05 ¹²	31.23	24.18	7.05	0.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/02/05 ¹²	31.23	22.61	8.62	0.00					<50	< 0.5	< 0.5	<0.5	<0.5	< 0.5	
03/24/06	31.23	24.22	7.01	0.00											
03/05/07	31.23	23.53	7.70	0.00											
03/17/08	31.23	22.30	8.93	0.00											
03/03/09	31.23	23.43	7.80	0.00											
03/17/10	31.23	23.67	7.56	0.00											
03/04/11	31.23	22.98	8.25	0.00											
03/20/12 ¹³	31.23	23.07	8.16	0.00											
03/23/12 ¹²	31.23	23.02	8.21	0.00				110/<50 ¹⁴	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
33, 20, 12	- · ·				50 ¹⁶ /	50 ¹⁶ /									
09/04/12 ¹²	31.23	22.05	9.18	0.00	60 ^{14,15,16,17}	60 ^{14,15,16,17}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/07/12 ¹²	31.23	23.28	7.95	0.00	200 ¹⁶ / <40 ^{14,15,16}	200 ¹⁶ / <40 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/12/13 ¹²	31.23	22.85	8.38	0.00	<42 ¹⁶ / <42 ^{14,15,16}	<42 ¹⁶ / <42 ^{14,15,16}		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	В	T	E	X	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)
C-11 (cont)															
06/11/13 ¹²	31.23	22.33	8.90	0.00	<4116	<4116		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/10/13 ¹²	31.23	21.63	9.60	0.00	<40 ¹⁶	<40 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/04/13 ¹²	31.23	21.59	9.64	0.00	410 ¹⁶	410 ¹⁶		56/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/07/14 ²⁵	31.23	22.13	9.10	0.00	44 ¹⁶	44 ¹⁶		<50/ <50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/25/14 ²⁵	31.23	21.85	9.38	0.00	<48		<48	<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
08/29/14 ²⁵	31.23	21.12	10.11	0.00	<38 ^{14,15,16}	<38 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
12/12/14 ²⁵	31.23	23.38	7.85	0.00	<38 ^{14,15,16}	<38 ^{14,15,16}		<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
06/01/15 ²⁵	31.23	22.23	9.00	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
10/23/15 ²⁵		20.74	10.49					<50 ^{14,15}	<50	<0.5	<0.5	<0.5			
	31.23			0.00									<0.5		
04/07/16 ²⁵	31.23	23.55	7.68	0.00				<50 ^{14,15}	<50	<0.5	<0.5	<0.5	<0.5		
02/08/17 ²⁵ 10/27/17²⁵	31.23 31.23	24.79 21.63	6.44 9.60	0.00 0.00		 	 	<50 ^{14,15} < 50^{14,15}	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5		
TRIR RI ANIK															
TRIP BLANK 09/07/90									<50	<0.5	<0.5	<0.5	<0.5		
12/20/90									<50	<0.5	<0.5	<0.5	<0.5		
03/06/91									<50	<0.5	<0.5	<0.5	<0.5		
06/28/91									<50	<0.5	<0.5	<0.5	<0.5		
09/26/91									<50	< 0.5	< 0.5	< 0.5	< 0.5		
01/27/92									<50	< 0.5	< 0.5	< 0.5	< 0.5		
04/20/92									<50	<0.5	<0.5	<0.5	<0.5		
07/17/92									<50	<0.5	<0.5	<0.5	<0.5		
10/29/92									<50	<0.5	<0.5	<0.5	<0.5		
01/20/93									<50	<0.5	<0.5	<0.5	<0.5		
05/03/93									<50	<0.5	<0.5	<0.5	<1.5		
07/28/93									<50	<0.5	<0.5	<0.5	<1.5		
10/27/93									<50	<0.5	<0.5	<0.5	<1.5		
03/31/94									<50	<0.5	<0.5	<0.5	<0.5		
06/08/94									<50	<0.5	<0.5	<0.5	<0.5		
11/09/94									<50	<0.5	<0.5	<0.5	<0.5		
12/14/94									<50	<0.5	<0.5	<0.5	<0.5		
03/30/95									<50	<0.5	<0.5	<0.5	<0.5		
06/30/95									<50	<0.5	<0.5	<0.5	<0.5		
09/22/95									<50	<0.5	<0.5	<0.5	<0.5	 -0 F	
12/11/95									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/08/96									<50	<0.5	<0.5	<0.5	<0.5	<5.0	
06/21/96									<50	<0.5	<0.5	<0.5	<0.5	<5.0	

				LNAPL			TPH								
WELL ID/	TOC	GWE	DTW	Thickness	TOTAL TPH	TPH-MO	C13-C40	TPH-DRO	TPH-GRO	B	T (1)	E	X	MtBE	HVOCs
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)
TRIP BLANK (cont)															
09/27/96									<50	<0.5	<0.5	<0.5	<0.5	<5.0	
01/03/97									<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/28/97									<50	<0.5	<0.5	<0.5	<0.5	<5.0	
09/30/97 03/28/98									<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<5.0 <2.5	
09/08/98									<50	<0.5	<0.5	<0.5	<0.5	<2.5	
03/19/99									<50	<0.5	<0.5	<0.5	<0.5	<2.5	
09/21/99									<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/21/00									<50	< 0.5	< 0.5	< 0.5	< 0.5	<2.5	
08/28/00									<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5	
03/02/01									<50.0	<0.500	<0.500	< 0.500	<0.500	<5.00	
09/04/01									<50	< 0.50	<0.50	<0.50	<1.5	<2.5	
QA															
03/21/02									<50	< 0.50	<0.50	< 0.50	<1.5	<2.5	
09/04/02 03/31/03									<50	<0.50 <0.5	<0.50 <0.5	<0.50 <0.5	<1.5 <1.5	<2.5	
09/17/03 ¹²									<50 <50		<0.5	<0.5	<0.5	<2.5	
										<0.5				<0.5	
03/05/04 ¹²									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/03/04 ¹²									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/02/05 ¹²									<50	<0.5	<0.5	< 0.5	<0.5	<0.5	
09/02/05 ¹²									<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
03/24/06 ¹²									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/05/07 ¹²									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/17/08 ¹²									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/03/09 ¹²									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/04/12 ¹²									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/07/12 ¹²									<50	<0.5	<0.5	<0.5	<0.5	< 0.5 22	
03/12/13 ¹²									<50	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	
06/11/13 ¹²									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/10/13 ¹²									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/04/13 ¹²												<0.5	<0.5	<0.5	
									<50	<0.5	<0.5			<0.5	
02/07/14 ²⁵									<50	<0.5	<0.5	<0.5	<0.5		
06/25/14 ²⁵									<50	<0.5	<0.5	<0.5	<0.5		
08/29/14 ²⁵									<50	<0.5	<0.5	<0.5	<0.5		
12/12/14 ^{25,27}									<50	<0.5	<0.5	<0.5	<0.5		
12/12/14 ^{25,28}									<50	<0.5	<0.5	<0.5	<0.5		
06/01/15 ^{25,27}									<50	<0.5	<0.5	<0.5	<0.5		_
06/01/15 ^{25,28}									<50	<0.5	<0.5	<0.5	<0.5		

WELL ID/ DATE	TOC (ff.)	GWE (msl)	DTW (ft.)	LNAPL Thickness (ff.)	TOTAL TPH (µg/L)	TPH-MO (µg/L)	ΤΡΗ C13-C40 (μg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	X (µg/L)	MtBE (μg/L)	HVOCs (µg/L)
57112	(,	(11101)	(11.7)	()	(#9/-/	(P9/-)	(29/2)	(49/-)	(P9/-/	(49/-)	(P9/-)	(P9/-)	(P9/-)	(49/-)	(49/1/
QA (cont)															
10/23/15 ²⁵									<50	<0.5	<0.5	<0.5	<0.5		
04/07/16 ²⁵									<50	<0.5	<0.5	<0.5	<0.5		
02/08/17 ²⁵									<50	< 0.5	< 0.5	< 0.5	< 0.5		
10/27/17 ²⁵									<50	<0.5	<0.5	<0.5	<0.5		

Table 2

Groundwater Monitoring Data and Analytical Results

Chevron-branded Service Station 90504 15900 Hesperian Boulevard San Lorenzo, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to August 28, 2000, were compiled from reports prepared by Blaine Tech Services, Inc. Current groundwater monitoring data was provided by Gettler - Ryan Inc. Current laboratory analytical results were provided by Eurofins Lancaster Laboratories.

TOC = Top of Casing

DRO = Total Petroleum Hydrocarbons as Diesel

(#g/L) = Micrograms per liter

(ft.) = Feet

GRO = Gasoline Range Organics

(ppb) = Parts per billion

(D) = Duplicate

(D) = Duplicate

GWE = Groundwater Elevation B = Benzene (D) = Duplicate (msl) = Mean sea level T = Toluene ND = Not Detected

DTW = Depth to Water E = Ethylbenzene --- = Not Measured/Not Analyzed
LNAPL = Light Non-Aqueous Phase Liquid X = Xylenes QA = Quality Assurance/Trip Blank

TPH = Total Petroleum Hydrocarbons MtBE = Methyl Tertiary-Butyl Ether QC = Quality Control

MO= Motor Oil HVOCs = Halogenated Volatile Organic Compounds

- t TOC elevations for wells C-2, C-3, C-7, and C-8 were inadvertently switched from September 17, 2003, to March 5, 2007. TOC's have been corrected as of March 17, 2008, to reflect the current TOC data.
- ** GWE has been corrected due to the presence of LNAPL; correction factor: [(TOC DTW) + (LNAPL Thickness x 0.80)].
- Depth to water measured from top of well vault.
- Detection limit raised due to foaming sample.
- Other HVOCs were not detected at detection limits of 0.5-1.0 ppb.
- Chloroform detected at <0.5 ppb.</p>
- ⁵ All site monitoring wells were re-sampled due to an excessive number of foaming samples on the 09/29/94 event.
- 6 Chloroform detected at 1.8 ppb.
- Laboratory report indicates uncategorized compounds are not included in gas concentration.
- ⁸ Chromatogram pattern indicates an unidentified hydrocarbon.
- Laboratory report indicates sample diluted due to foaming
- MtBE value was reported from a re-analyzation on 04/01/99.
- Laboratory report indicates weathered gasoline C6-C12.
- BTEX and MtBE by EPA Method 8260.
- Well redeveloped.
- ¹⁴ Analyzed with Silica gel cleanup.
- Laboratory report indicates the reverse surrogate, capric acid, is present at <1%.
- Laboratory report indicates TPH quantitation is based on peak area comparison of the sample pattern to that of a hydrocarbon component mix calibration in a range that includes C8 (n-octane) through C40 (n-tetracontane) normal hydrocarbons.
- Laboratory report indicates target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was re-analyzed outside of the method required holding time, and the method blank results are outside the from the first trial. Similar results were obtained in both trials.

Table 2

Groundwater Monitoring Data and Analytical Results

Chevron-branded Service Station 90504 15900 Hesperian Boulevard San Lorenzo, California

EXPLANATIONS:

- Laboratory report indicates target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside of the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.
- 19 Laboratory report indicates due to the dilution of the sample extract, capric acid recovery can not be determined.
- Laboratory report indicates due to the matrix of the sample extract, capric acid recovery can not be determined.
- ²¹ Laboratory report indicates reporting limits were raised due to interference from the sample matrix.
- Laboratory report indicates MtBE in the continuing calibration verification standard is outside the QC acceptance limits. The following corrective action was taken: This analysis was repeated using a previously opened container with headspace under a continuing calibration standard that was within the QC acceptance limits. MtBE was not detected in either analysis. Results reported are from the initial analysis.
- ²³ Laboratory report indicates due to the presence of fuel in the sample extract, capric acid recovery can not be determined.
- ²⁴ Laboratory report indicates the surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.
- ²⁵ BTEX by EPA Method 8260.
- Well purged and sampled using low-flow procedures.
- QA submitted with samples collected from wells sampled using disposable bailers.
- ²⁸ QA submitted with samples collected from wells sampled using low-flow procedures.
- ²⁹ Laboratory report indicates reporting limits were raised due to limited sample volume.

Table 3 Additional Groundwater Analytical Results

WELL ID	DATE	ETHANOL (μg/L)	TBA (μg/L)	DIPE (µg/L)	E†BE (µg/L)	TAME (µg/L)	NAPH (µg/L)
C-1	03/19/99	<2,500	<500	<10	<10	<10	
C-I		<2,500 <50	<500				
	03/05/04 09/03/04	SAMPLED ANNUALLY					
	03/02/05	SAMFLED ANNUALLY <50					
	03/02/03	<50 <50					
	03/05/07	<50 <50					
	03/03/07	<50 <50		 	 		
	03/03/09	<50					
	02/07/14						<1
	06/25/14						<1
	08/29/14						<1
	12/12/14						<1
	06/01/15 ¹						<1
	06/01/15						<1 <1
	10/23/15 ¹						<1
C-2	03/19/99	<2,500	<500	<10	<10	<10	
	03/05/04	<50					
	09/03/04	SAMPLED ANNUALLY					
	03/02/05	<50					
	03/24/06	<50					
	03/05/07	<50					
	03/17/08	<50					
	03/03/09	<50					
	02/07/14						<1
	08/29/141						<1
	08/29/14						<1
	12/12/14						<1
	10/23/15 ¹						
	10/23/13						<1
C-3	03/19/99	<500	<100	<2.0	<2.0	<2.0	
	03/05/04	<50					
	09/03/04	SAMPLED ANNUALLY					
	03/02/05	<50					
	03/24/06	<50					
	03/05/07	<50					
	03/17/08	<50					

Table 3 Additional Groundwater Analytical Results

WELL ID	DATE	ETHANOL	TBA	DIPE	EtBE	TAME	NAPH
		(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
C-3 (cont)	06/25/14						<1
	03/03/09	<50					
	02/07/14						<1
	08/29/14						<1
	12/12/14						<1
	06/01/15						<1
	10/23/15						<1
C-4	02/07/14						<1
	08/29/14						<1
	12/12/14						<1
	06/01/15						<1
	10/23/15						<1
C-5	02/07/14						<1
	06/25/14						<1
	08/29/14						<1
	12/12/14						<1
	06/01/15						<1
	10/23/15						<1
C-6	02/07/14						<1
	06/25/14						<1
	08/29/14						<1
	12/12/14						<1
	06/01/15						<1
	10/23/15						<1
C-7	03/19/99	<500	<100	<2.0	<2.0	<2.0	
· ·	03/05/04	<50					
	09/03/04	SAMPLED ANNUALLY					
	03/02/05	<50					
	03/24/06	<50					
	03/05/07	<50					
	03/17/08	<50					
	03/03/09	<50					

Table 3 Additional Groundwater Analytical Results

Chevron-branded Service Station 90504 15900 Hesperian Boulevard San Lorenzo, California

WELL ID	DATE	ETHANOL	TBA	DIPE	EtBE	TAME	NAPH
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)
C-7 (cont)	02/07/14						<1
	06/25/14						<1
	08/29/14						<1
	12/12/14						<1
	06/01/15						<1
	10/23/15						<1
C-8 03/1	03/19/99	<500	<100	<2.0	<2.0	<2.0	
	03/05/04	<50					
	09/03/04	SAMPLED ANNUALLY					
	03/02/05	<50					
	03/24/06	<50					
	03/05/07	<50					
	03/17/08	<50					
	03/03/09	<50					
	02/07/14						9
	06/25/14						8
	08/29/141						7
	08/29/14						8
	12/12/14 ¹						3
	12/12/14						9 ²
	06/01/15 ¹						10
	06/01/15						10
	10/23/15 ¹						9
	04/07/16 ¹						<10
	02/08/171						2
	10/27/17 ¹						6
C-9	09/17/03	<50					
	03/05/04	<50					
	09/03/04	<50					
	03/02/05	<50					
	09/02/05	<50					
	02/07/14						<1
	06/25/14						<1
	08/29/14						<1
	12/12/14						<1
	06/01/15						<1
	10/23/15						<1

Table 3 Additional Groundwater Analytical Results

Chevron-branded Service Station 90504 15900 Hesperian Boulevard San Lorenzo, California

WELL ID	DATE	ETHANOL	TBA	DIPE	EtBE	TAME	NAPH
		(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)
C-10	03/19/99	<500	<100	<2.0	<2.0	<2.0	
	09/17/03	<50					
	03/05/04	<50					
	09/03/04	<50					
	03/02/05	<50					
	09/02/05	<50					
	02/07/14						<1
	06/25/14						<1
	08/29/14						<1
	12/12/14						<1
	06/01/15						<1
	10/23/15						<1
0.11	00/17/02	450					
C-11	09/17/03	<50					
	03/05/04	<50					
	09/03/04	<50					
	03/02/05	<50					
	09/02/05	<50					 -1
	02/07/14						<1
	06/25/14						<1
	08/29/14						<1 <1
	12/12/14						
	06/01/15						<1
	10/23/15						<1
TRIP BLANK							
QA	06/25/14						<1

Table 3

Additional Groundwater Analytical Results

Chevron-branded Service Station 90504 15900 Hesperian Boulevard San Lorenzo, California

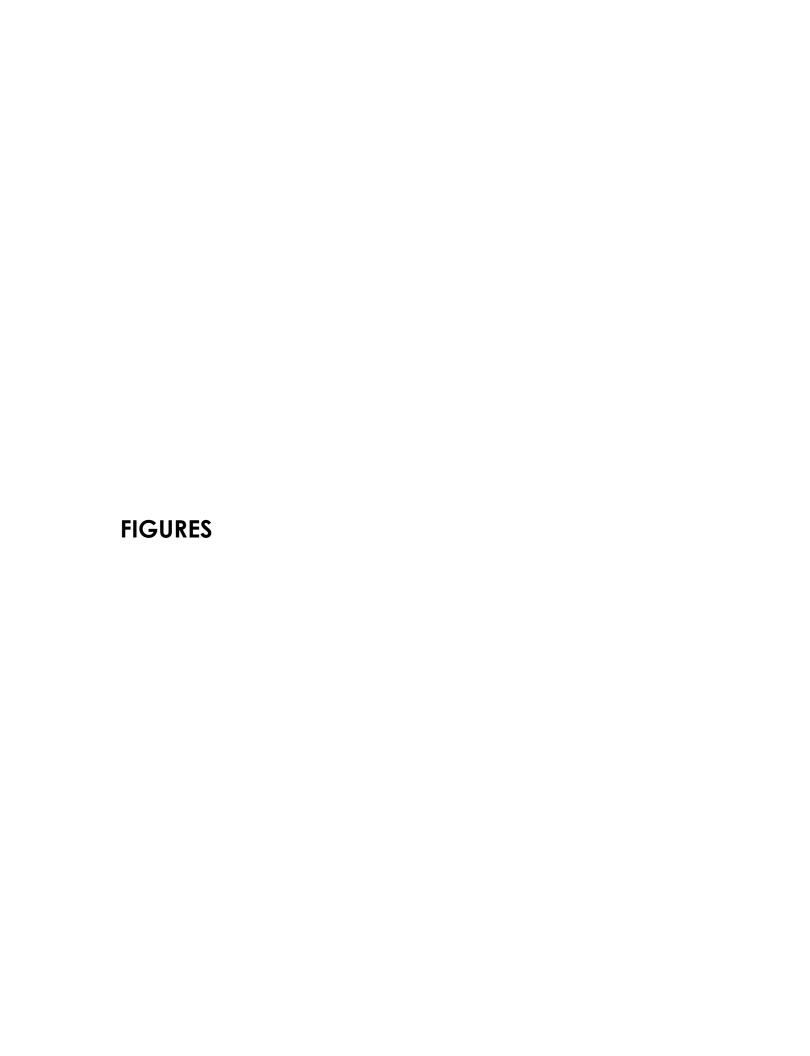
EXPLANATIONS:

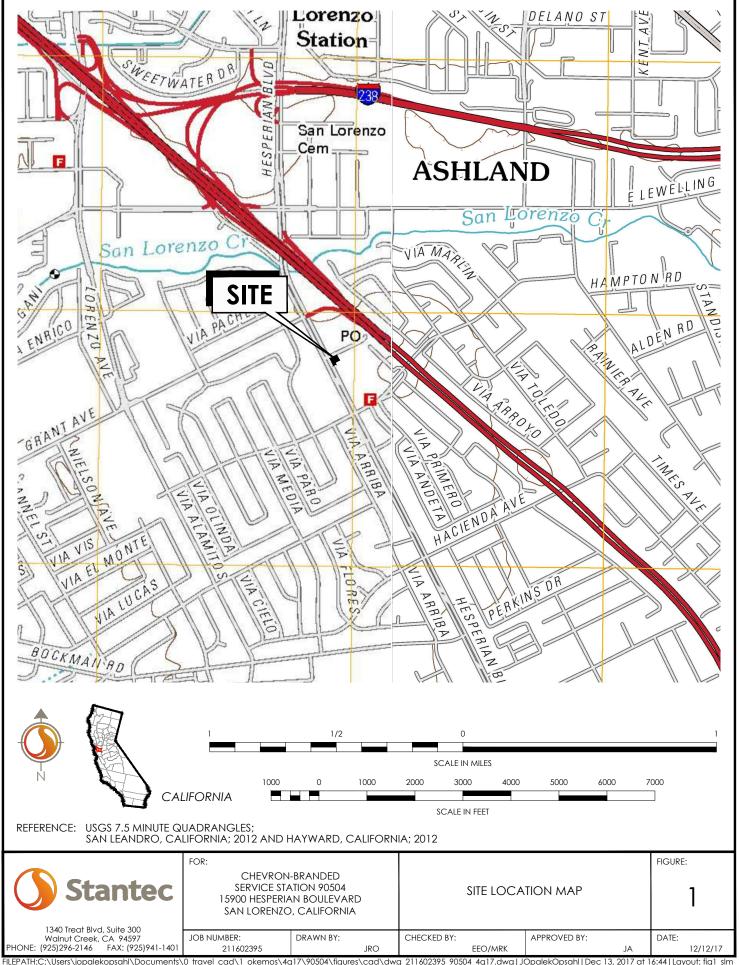
Groundwater laboratory analytical results before September 17, 2003, were compiled from reports prepared by Blaine Tech Services, Inc. Groundwater monitoring data and laboratory analytical results between 2004 and 2009 and since 2014 were provided by Gettler-Ryan Inc. and Eurofins Lancaster Laboratories.

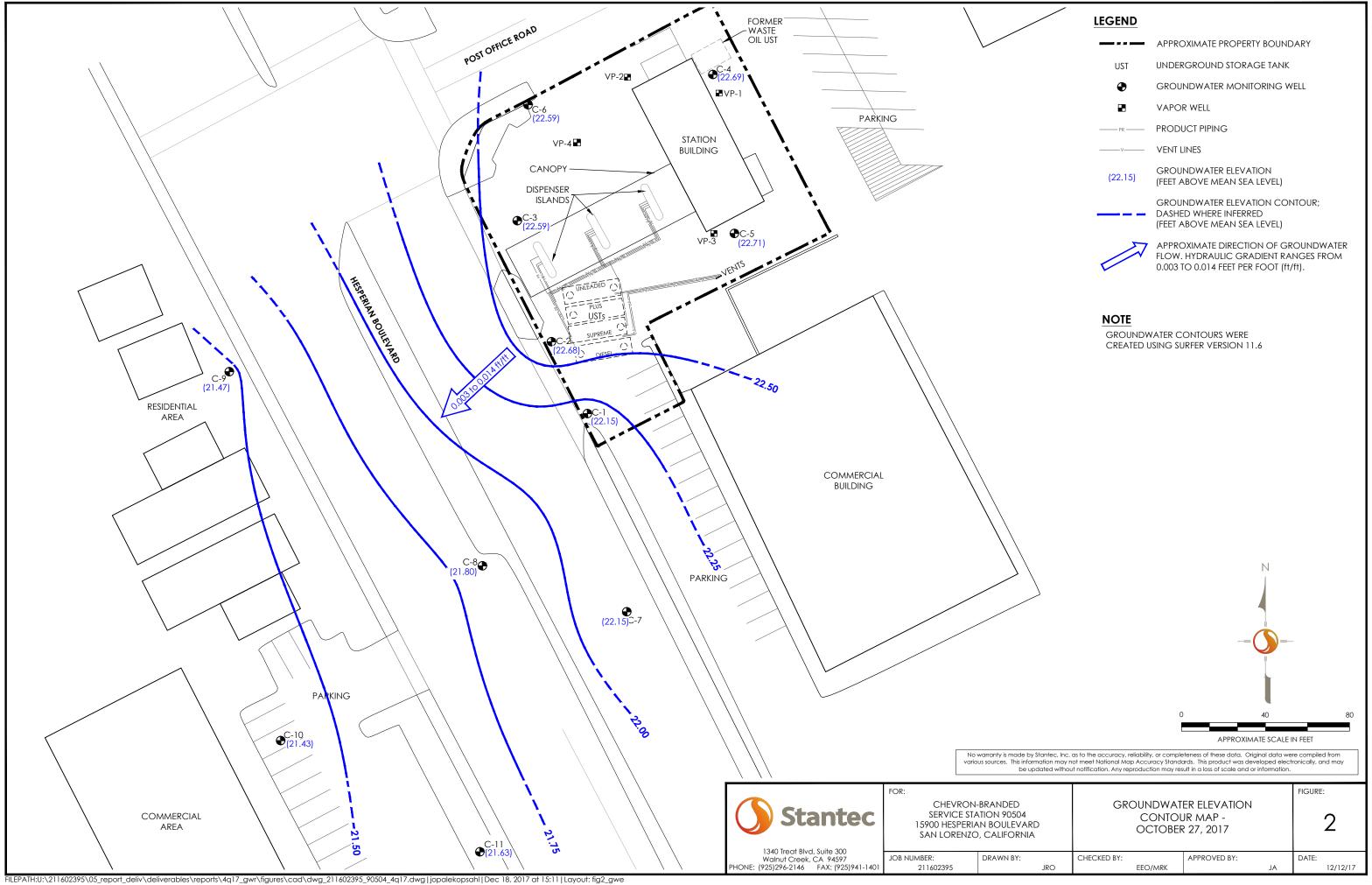
TBA = Tertiary-Butyl Alcohol
MtBE = Methyl Tertiary-Butyl Ether
DIPE = Di-Isopropyl Ether
ETBE = Ethyl Tertiary-Butyl Ether
TAME = Tertiary-Amyl Methyl Ether
NAPH = Naphthalene
(µg/L) = Micrograms per liter
-- = Not Analyzed

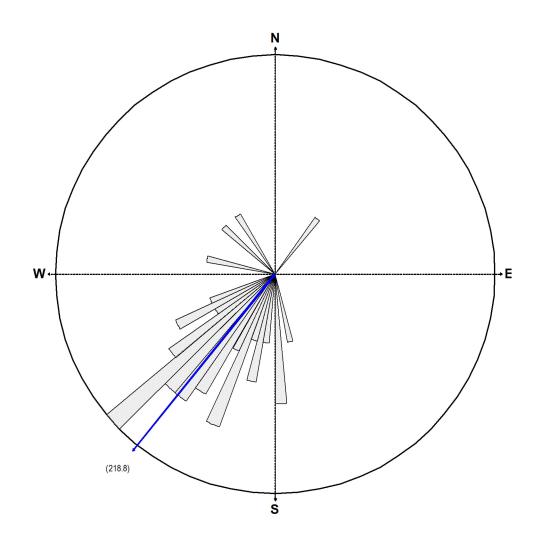
Well purged and sampled using low-flow procedures.

² Laboratory report indicates reporting limits were raised due to interference from the sample matrix.









EQUAL AREA PLOT

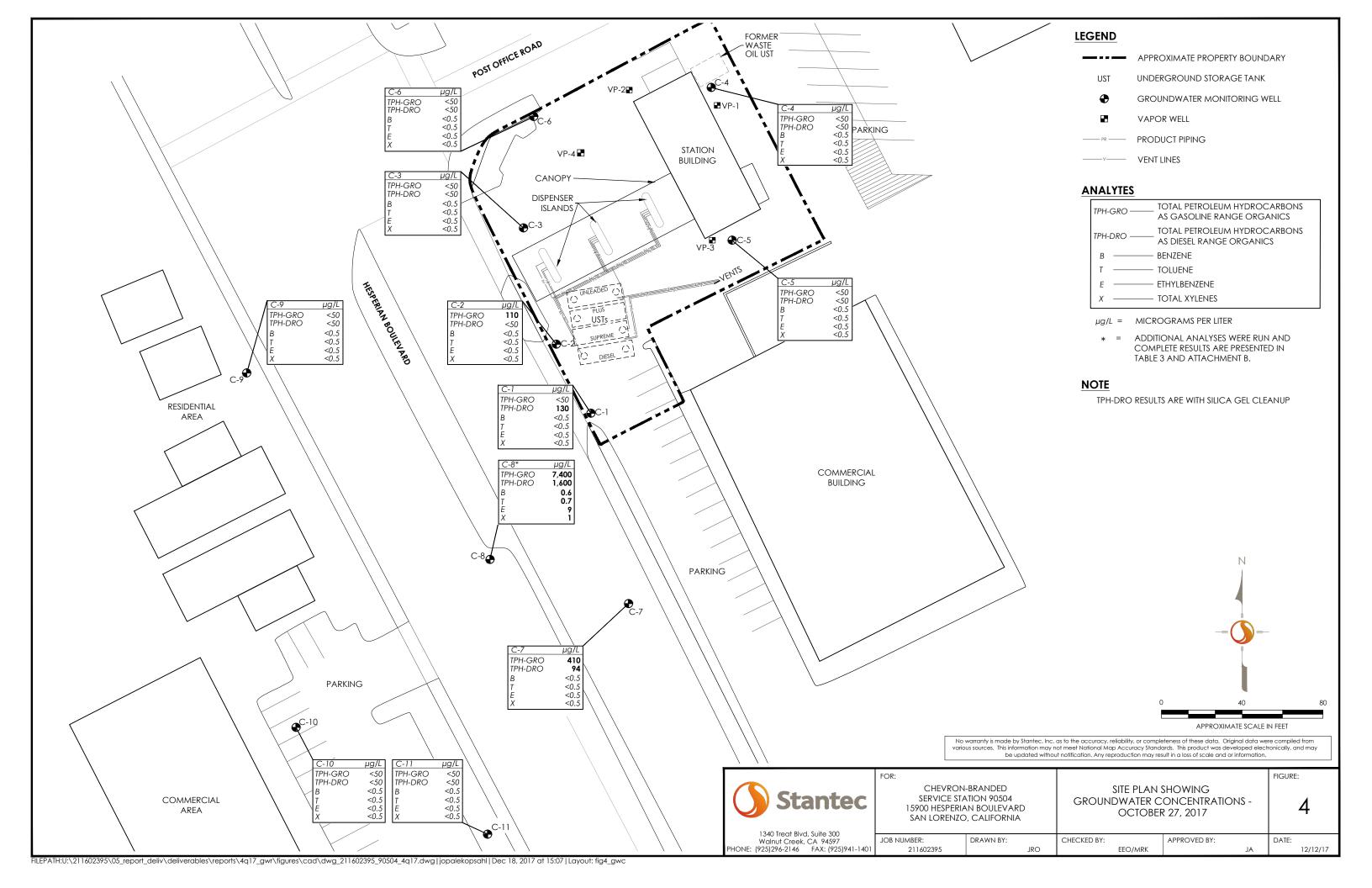
Number of Points 61 Class Size 5

Vector Mean 218.80

Vector Magnitude 53.18 Consistency Ratio 0.87

NOTE: ROSE DIAGRAM IS BASED ON THE DIRECTION OF GROUNDWATER FLOW BEGINNING FOURTH QUARTER 1989. THE ROSE DIAGRAM INCLUDES BOTH THE ON-SITE AND OFF-SITE DIRECTIONS OF GROUNDWATER FLOW FOR THIRD QUARTER 2014.

Stantec	SERVICE STA 15900 HESPERIA	I-BRANDED ATION 90504 AN BOULEVARD), CALIFORNIA	GROUN	GROUNDWATER FLOW DIRECTION ROSE DIAGRAM - OCTOBER 27, 2017				3
1340 Treat Blvd, Suite 300 Walnut Creek, CA 94597	JOB NUMBER:	DRAWN BY:	CHECKED BY:		APPROVED BY:		DATE:	
PHONE: (925)296-2146 FAX: (925)941-1401	211602395	JRO		EEO/MRK	·	JA		12/12/17



ATTACHMENT A
Gettler-Ryan Inc. Field Data Sheets and Standard
Operating Procedures – Fourth Quarter 2017

TRANSMITTAL

November 6, 2017

G-R #17155259

TO:

Mr. Jaff Auchterlonie

Stantec

555 Capitol Mall, Suite 650 Sacramento, California 95814

FROM:

Deanna L. Harding

Project Manager Gettler-Ryan Inc.

6805 Sierra Court, Suite G Dublin, California 94568 **RE:** Chevron Service Station

#9-0504

15900 Hesperian Boulevard San Lorenzo, California

RO 0000007

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Second Semi Annual Event of October 27, 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/9-0504

WELL CONDITION STATUS SHEET

| Client/ | Facility #: | Chevron #9-0504 | Job #: | 17155259 |
| Site Address: | 15900 Hesperian Blvd. | Event Date: | 10 · 27 · 17 |
| City: | San Lorenzo, CA | Sampler: | F4

						•	Oampier.		++		
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)	REPLAC LOCK Y/O	REPLACE CAP	WELL VAULT Manufacture/Size/ # of Bolts	Picture Taken
C-1	DK	26		→	OL		->			1.5'x 25' JANN	
C-2	OK	NA		>	<u>ev</u>					1.3 = 2.3 VA70.	
C-3	OL	NA		>	DL		 ->			CHUSTY Box	
C-4	OK						4			Enco (12" No CHRISTY BOX	<u> </u>
C-2 C-3 C-4 C-5 C-6	BL	NA		>	OK		→			CHILLY BOX	
C-6	BIL	Na		>	er		>	4	4	1- 11	
RUMS PRES	ENT ONSI	TE? Y (1)	#:		ARE DRUM	IS PROPER	LY LABELE	DS A\N		LOCATION OF DRUMS:	

WELL CONDITION STATUS SHEET

2052

Client/ Facility #: Chevron #9-0504 Job #: 17155259 Site Address: 15900 Hesperian Blvd. 10.27.17 **Event Date:** San Lorenzo, CA City: Sampler: Apron Gasket/ **Bolt Flanges** Vault **Grout Seal** Casing **Bolts** Condition REPLACE REPLACE O-Ring B=Broken **WELL ID Pictures** (Deficient) (Condition Frame **WELL VAULT** (M) Missing C=Cracked LOCK CAP (M) Missing S=Stripped Taken Inches from Condition prevents tight (R) Replaced Manufacture/Size/# of Bolts B=Broken (R) Replaced Y/NY/NR=Retaped TOC YID cap seal) G=Gone X OF No CHRISTY 10 OK OK OK CANDSCAPE BOX
-EMGO (12"/7 NA Ok OK OX OK DRUMS PRESENT ONSITE? Y //N #: ARE DRUMS PROPERLY LABELED? Y/N LOCATION OF DRUMS: Comments

STANDARD OPERATING PROCEDURE, LOW-FLOW PURGING AND SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures."

A QED Well WizardTM (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multiparameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet. Total well depths are measured annually.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the inline flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T (\pm 10%), pH (\pm 0.1 unit), and Ec (\pm 10 uS) are required to stabilize. Additional parameters that may be required are DO (\pm 0.2 mg/l) and ORP (\pm 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. 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. 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. 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.

As requested by Chevron Environmental Management Company, 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:	Chevron #9- 15900 Hespe		Job Number:	17155259	(in all of the)	
			u	Event Date:	10-27-17	(inclusive)
City:	San Lorenzo	, CA		Sampler:	FT	
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 3 [(Height of W	Volui Facto heck if water column	or (VF) 4"= 0. n is less then 0.50 x3 case volume =	66 5"= 1.02 6"= 1.50 ft. Estimated Purge Volume:	(2400 hrs)(2400 hrs)ftftftftftscription: Sock (circle one) skimmer: itr Vell: Itr
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.)	te: 1205 /10	gpm.	Weather Con Water Color: Sediment De me:	CLEAN	D.O. C	ng:
CAMPIFID	(#) CONTAINED		LABORATORY IN		7	LVOCO
SAMPLE ID C- \	(#) CONTAINER	REFRIG. YES	PRESERV. TYPE HCL	LANCASTER	TPH-GRO(8015)/BTEX(826	LLYSES
	2-x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc COLUMN	-/
						
COMMENTS:						
Add/Replaced Ga	sket:	Add/Replace	d Bolt:	Add/Replaced Loc	k: Add/Renla	ced Plug



WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#:	Chevron #9-			Job Number:	17155259		
Site Address:	15900 Hespe	rian Blvd	1.	Event Date:	10.27	- (inclusive)	
City:	San Lorenzo	, CA		Sampler:	Fr		•
							•
Well ID	C-2	_	D	ate Monitored:	10.27	ı.ŋ	_
Well Diameter	2 /3 in.	<u>.</u>	Volume	3/4"= 0.0	2 1"= 0.04 2	2"= 0.17 3"= 0.38	
Total Depth	19.11 ft.	-	Factor	(VF) 4"= 0.66	5 5"= 1.02 6	"= 1.50 12"= 5.80	
Depth to Water		_ 🔲 CI	heck if water column	is less then 0.50	ft.		
	8.33		=			/olume:	_ gal.
Depth to Water	w/ 80% Recharge	[(Height of W	ater Column x 0.20) +	DTW]:	Time Starte	d:	(2400 bre)
urge Equipment:		9.	mpling Equipment:			leted:	
Disposable Bailer			sposable Bailer			oduct:	
stainless Steel Baile	er ———		essure Bailer	-		ater:	ft
Stack Pump			etal Filters			n Thickness:	ft
eristaltic Pump		Pe	ristaltic Pump		Visual Confi	rmation/Description:	
ED Bladder Pump)	QE	ED Bladder Pump		Skimmer / A	beorbant Sock (circl	e one)
		Ot	her:		Amt Remove	ed from Skimmer:	Itr
						ed from Well:	
					vvater Remo	oved:	ltr
Start Time (purg Sample Time/Da Approx. Flow Ra Did well de-wate	ate: \300 /lc ate: 200 m	Ipm. yes, Time:	Weather Con Water Color: Sediment DetVolum		リング (E	92
ample Time/Dapprox. Flow Ra	ate: \300 /lc ate: 200 m	lpm.	Water Color: Sediment Des		Odor: Y / 🜒	E	as parametei
ample Time/Da pprox. Flow Ra lid well de-wate Time (2400 hr.)	ate: 1300 / 10 ate: 200 m er? No If Volume (Liters) 3.L 4.2	pH 7.65 7.76	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282	CLGAN Scription: ne: Temperature (Odor: Y / 🔊 Vovi tr. DTW @ Sai D:0+ (mg/L)	mpling: 10. ORP (m)4. TURBIDITY() 43.2	Gauge DTW as parameter are recorded 10.82
ample Time/Da pprox. Flow Ra lid well de-wate Time (2400 hr.)	ate: 1300 / 10 ate: 200 m er? No If Volume (Liters) 3.L 4.2	pH 7.65 7.76	Water Color: Sediment Des Volum Conductivity // ms µmhos/cm) 1275	CLGAN Scription: ne: Temperature (O / F) 23.8 23.6 23.5 FORMATION	Odor: Y / 🔊 Vovi tr. DTW @ Sai D:0+ (mg/L)	Empling: 10. ORP (m)4. TURBIDITY() 43.2	Gauge DTW as parameter are recorded 10.82
ample Time/Da pprox. Flow Ra id well de-wate (2400 hr.) 1243 1246	ate: 1300 / 10 ate: 200 m er? No If Volume (Liters) 3.L 4.2 4.8	Ipm. yes, Time: pH 7.65 7.68 1.7(Water Color: Sediment Des Volum Conductivity (13) / mS µmhos/cm) 1275 1278 1282	CLGAN Scription: ne: Temperature (Odor: Y / 🔊 Vovi tr. DTW @ Sai D:0+ (mg/L)	TURBIDITY(N	Gauge DTW as parameter are recorded 10.82
ample Time/Da pprox. Flow Ra id well de-wate (2400 hr.) 1343 1246 1246	ate: \\\ \\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \	pH 7.65 7.71 REFRIG. YES YES	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282 ABORATORY IN PRESERV. TYPE HCL HCL	CLEAN Scription: ne: Temperature (O / F) 23.8 23.5 FORMATION LABORATORY LANCASTER LANCASTER	Odor: Y / (1) Tr. DTW @ Sai D:0+ (mg/L) Post: TPH-GRO(8015)/ TPH-GRO(8015)/	Empling: 10.	Gauge DTW as parameter are recorded 10.32 10.37 10.92
Sample Time/Da spprox. Flow Ra bid well de-water (2400 hr.) 1243 1246 1245	ate: \\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	pH 7.66 7.71 REFRIG. YES	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282 ABORATORY IN PRESERV. TYPE HCL	CLEAN Scription: ne:	Odor: Y / 🔊 NOV Tr. DTW @ Sai	Empling: 10.	Gauge DTW as parameter are recorded 10.32 10.37 10.92
ample Time/Da pprox. Flow Ra id well de-wate (2400 hr.) 1343 1246 1246	ate: \\\ \\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \	pH 7.65 7.71 REFRIG. YES YES	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282 ABORATORY IN PRESERV. TYPE HCL HCL	CLEAN Scription: ne: Temperature (O / F) 23.8 23.5 FORMATION LABORATORY LANCASTER LANCASTER	Odor: Y / (1) Tr. DTW @ Sai D:0+ (mg/L) Post: TPH-GRO(8015)/ TPH-GRO(8015)/	Empling: 10.	Gauge DTV as paramete are recorded 10.82 10.87 10.92
ample Time/Da pprox. Flow Ra lid well de-wate (2400 hr.) 1343 1246 1246	ate: \\\ \\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \	pH 7.65 7.71 REFRIG. YES YES	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282 ABORATORY IN PRESERV. TYPE HCL HCL	CLEAN Scription: ne: Temperature (O / F) 23.8 23.5 FORMATION LABORATORY LANCASTER LANCASTER	Odor: Y / (1) Tr. DTW @ Sai D:0+ (mg/L) Post: TPH-GRO(8015)/ TPH-GRO(8015)/	Empling: 10.	Gauge DTV as paramete are recorded 10.82 10.87 10.92
ample Time/Da pprox. Flow Ra lid well de-wate (2400 hr.) 1343 1246 1246	ate: \\\ \\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \	pH 7.65 7.71 REFRIG. YES YES	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282 ABORATORY IN PRESERV. TYPE HCL HCL	CLEAN Scription: ne: Temperature (O / F) 23.8 23.5 FORMATION LABORATORY LANCASTER LANCASTER	Odor: Y / (1) Tr. DTW @ Sai D:0+ (mg/L) Post: TPH-GRO(8015)/ TPH-GRO(8015)/	Empling: 10.	Gauge DTV as paramete are recorder 10.82 10.87 10.92
ample Time/Da pprox. Flow Ra lid well de-wate (2400 hr.) 1343 1246 1246	ate: \\\ \\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \	pH 7.65 7.71 REFRIG. YES YES	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282 ABORATORY IN PRESERV. TYPE HCL HCL	CLEAN Scription: ne: Temperature (O / F) 23.8 23.5 FORMATION LABORATORY LANCASTER LANCASTER	Odor: Y / (1) Tr. DTW @ Sai D:0+ (mg/L) Post: TPH-GRO(8015)/ TPH-GRO(8015)/	Empling: 10.	Gauge DTV as paramete are recorded 10.82 10.87 10.92
Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1243 1244 SAMPLE ID C- 2	## CONTAINER ## CONTAINER ## CONTAINER ## CONTAINER ## CONTAINER ## CONTAINER ## X voa vial ## X voa via	pH 7.65 7.68 7.71 REFRIG. YES YES YES	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282 ABORATORY IN PRESERV. TYPE HCL HCL NP	Temperature (O / F) 23.8 23.6 23.5 FORMATION LABORATORY LANCASTER LANCASTER LANCASTER	Odor: Y / (1) Tr. DTW @ Sai D:0+ (mg/L) Post: TPH-GRO(8015)/ TPH-GRO(8015)/	Empling: 10.	Gauge DTW as parameter are recorded 10.32 10.37 10.92
Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1243 1244 1245	ate: \\\ \\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \	pH 7.65 7.68 7.71 REFRIG. YES YES YES	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282 ABORATORY IN PRESERV. TYPE HCL HCL NP	Temperature (O / F) 23.8 23.6 23.5 FORMATION LABORATORY LANCASTER LANCASTER LANCASTER	Odor: Y / (1) Tr. DTW @ Sai D:0+ (mg/L) Post: TPH-GRO(8015)/ TPH-GRO(8015)/	Empling: 10.	Gauge DTW as parameter are recorded 10.32 10.37 10.92
Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1243 1244 SAMPLE ID C- 2	## CONTAINER ## CONTAINER ## CONTAINER ## CONTAINER ## CONTAINER ## CONTAINER ## X voa vial ## X voa via	pH 7.65 7.68 7.71 REFRIG. YES YES YES	Water Color: Sediment Des Volum Conductivity (13 / mS µmhos/cm) 1275 1278 1282 ABORATORY IN PRESERV. TYPE HCL HCL NP	Temperature (O / F) 23.8 23.6 23.5 FORMATION LABORATORY LANCASTER LANCASTER LANCASTER	Odor: Y / (1) Tr. DTW @ Sai D:0+ (mg/L) Post: TPH-GRO(8015)/ TPH-GRO(8015)/	Empling: 10.	Gauge DTW as parameter are recorded 10.32 10.37 10.92



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #9-0	0504		Job Number: 17155259			
Site Address:	15900 Hespe	rian Blv	d.	Event Date: 10. 27.17		17	— (inclusive)
City:	San Lorenzo	, CA	· · · · · · · · · · · · · · · · · · ·	Sampler:	_		
		·					
Well ID	c_3_			Date Monitored:	10.2	7.17	_
Well Diameter	2 / ③ in.	_	Vol	ume 3/4"= 0.		2"= 0.17 3"= 0	38
Total Depth	19.41 ft.	_		tor (VF) 4"= 0.		6"= 1.50 12"= 5.	
Depth to Water	12.87 ft.		Check if water colum	ın is less then 0.50	ft.		
	6.54	xVF3	8 = 2.48	x3 case volume =	Estimated Purge V	olume: 7.0	gal.
Depth to Water	w/ 80% Recharge	[(Height of V	Vater Column x 0.20)	+ DTW]: <u>14.17</u>			
		_			Time Starte	d: leted:	
Purge Equipment:			ampling Equipment:			oduct:	
Disposable Bailer			isposable Bailer		Depth to W		, t
Stainless Steel Bail	er		ressure Bailer			n Thickness:	ft I
Stack Pump			letal Filters	<u></u>		irmation/Description	
Peristaltic Pump			eristaltic Pump				···
QED Bladder Pump			ED Bladder Pump		Skimmer /	bsorbant Sock (c	ircle one)
Other:		О	ther:			ed from Skimmer:	
					Amt Remov	ed from Well:	Itr
					Water Rem	oved:	ltr
Start Time (purg	e): 1105		Weather Co	nditions:	Sydr	<u>.</u>	
Sample Time/D	ate: 1315 //o	72.12	Water Color	LT. Bay.	Odor: Y / 🐠	7	
Approx. Flow Ra		gpm.	Sediment De		_	_	
		gpiii.	Sediment D	zacription.	5. SIL	1 4	
	~ A	If you Tie	ma: \/	_			
Did well de-wate	er?	If yes, Tir	me: V	_	_ gal. DTW @		3.01
Did well de-wate			Conductivity	olume:	_ gal. DTW @	Sampling:	3.0(
	Volume (gal.)	If yes, Tir	Conductivity (AS) mS	_			3.0(
Time (2400 hr.)	Volume (gal.)	pH	Conductivity (AS) mS µmhos/cm)	Temperature	gal. DTW @ D.O.	Sampling:	3.0(
Time (2400 hr.)	Volume (gal.)	рН 7.7 /	Conductivity (LES) mS µmhos/cm)	Temperature (O / F)	gal. DTW @ D.O.	Sampling:	3.0(
Time (2400 hr.)	Volume (gal.)	pH 7.7 1 7.74	Conductivity (LS) mS µmhos/cm) 565 572	Temperature (gal. DTW @ D.O.	Sampling:	3.0(
Time (2400 hr.)	Volume (gal.)	рН 7.7 /	Conductivity (LES) mS µmhos/cm)	Temperature (O / F)	gal. DTW @ D.O.	Sampling:	3.0(
Time (2400 hr.)	Volume (gal.)	pH 7.7 1 7.74	Conductivity (LS) mS µmhos/cm) 565 572	Temperature (gal. DTW @ D.O.	Sampling:	3.0(
Time (2400 hr.)	Volume (gal.) 2.5 5.0 7.0	pH 7.71 7.74 7.76	Conductivity (LS) mS µmhos/cm) 565 572 578 LABORATORY II	Temperature (Ø / F) 22.6 23.3 22.1	gal. DTW @ D.O.	Sampling:	3.01
Time (2400 hr.) 1110 1115 1120 SAMPLE ID	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER	pH 7.71 7.74 7.76 REFRIG.	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE	Temperature (Ø / F) 22.6 23.3 22-1	D.O. (mg/L)	Sampling:ORP (mV)	3.0(
Time (2400 hr.)	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (JS) mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL	Temperature (Ø / F) 22.6 22.3 22.1 NFORMATION LABORATORY LANCASTER	D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER	pH 7.71 7.74 7.76 REFRIG.	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE	Temperature (Ø / F) 22.6 23.3 22-1	D.O. (mg/L)	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL	Temperature (Ø / F) 22.6 22.3 22.1 NFORMATION LABORATORY LANCASTER	D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL	Temperature (Ø / F) 22.6 22.3 22.1 NFORMATION LABORATORY LANCASTER	D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL	Temperature (Ø / F) 22.6 22.3 22.1 NFORMATION LABORATORY LANCASTER	D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL	Temperature (Ø / F) 22.6 22.3 22.1 NFORMATION LABORATORY LANCASTER	D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL	Temperature (Ø / F) 22.6 22.3 22.1 NFORMATION LABORATORY LANCASTER	D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL	Temperature (Ø / F) 22.6 22.3 22.1 NFORMATION LABORATORY LANCASTER	D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID C-3	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL NP	Temperature (D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER L x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL NP	Temperature (Ø / F) 22.6 22.3 22.1 NFORMATION LABORATORY LANCASTER	D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID C-3	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER L x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL NP	Temperature (D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(
Time (2400 hr.) 1110 1115 1120 SAMPLE ID C-3	Volume (gal.) 2.5 5.0 7.0 (#) CONTAINER L x voa vial	pH 7.71 7.74 7.76 REFRIG. YES	Conductivity (LSV mS µmhos/cm) 565 572 578 LABORATORY II PRESERV. TYPE HCL NP	Temperature (D.O. (mg/L) TPH-GRO(8015)/E	ORP (mV) ANALYSES BTEX(8260)	3.0(



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Site Address: City:	Chevron #9-0 15900 Hespe San Lorenzo	rian Blvd	1.	Job Number: Event Date: Sampler:	17155259 10·27·17 FT	(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:	w/ 80% Recharge	xVF 32 ((Height of Wa Dis Pre Me Pe QE	Volument Factor Volument Volum	or (VF) 4"= 0. is less then 0.50 x3 case volume =	66 5"= 1.02 6"= 1.50	3"= 0.38 12"= 5.80
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.)	volume (gal.)	gpm.	Weather Con Water Color: Sediment Des Set Conductivity (15) mS µmhos/cm) 534 544	LT. Bay.	8. 8UTY	RP
<u></u>		L	ABORATORY IN	FORMATION		
SAMPLE ID C- 4	(#) CONTAINER x voa vial x 500ml ambers	YES YES	PRESERV. TYPE HCL NP	LABORATORY LANCASTER LANCASTER	TPH-GRO(8015)/BTEX(8260 TPH-DRO w/sgc COLUMN	YSES
COMMENTS: Add/Replaced Ga	sket:	Add/Replaced	I Bolt:	Add/Replaced Loc	k:Add/Replac	ed Plua:



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #9-0504	<u> </u>	Job Number:	17155259		
Site Address:	15900 Hesperian	Blvd.	Event Date:	10.27.17	(inclusive)	
City:	San Lorenzo, CA	\	- Sampler:	FT	<u> </u>	
			<u> </u>			
Well ID	c-5		Date Monitored:	10.27.17		
Well Diameter	2 /3 in.	V	olume 3/4"= 0	.02 1"= 0.04 2"= 0.17 3"=	0.38	
Total Depth	19.90 ft.		actor (VF) 4"= 0		5.80	
Depth to Water	11.90 ft.	Check if water colu	mn is less then 0.50) ft.		
	8.00 xVF	.38 = 3.04	x3 case volume =	Estimated Purge Volume: 9.0	gal.	
Depth to Water	w/ 80% Recharge [(Heig	ht of Water Column x 0.20) + DTW]: 13.50			
				Time Started: Time Completed:		
Purge Equipment:		Sampling Equipmen	t:	Depth to Product:		
Disposable Bailer		Disposable Bailer		Depth to Water:		
Stainless Steel Baile	er	Pressure Bailer		Hydrocarbon Thickness	n n	
Stack Pump		Metal Filters		Visual Confirmation/Descri		
Peristaltic Pump		Peristaltic Pump				
QED Bladder Pump		QED Bladder Pump		Skimmer Absorbant Sock	(circle one)	
Other:		Other:		Amt Removed from Skimm		
				Amt Removed from Well:	ltr	
				Water Removed:	ltr	
				<u>Landing</u>		
Start Time (purge	e): 0945	Weather C	onditions:	SUHY		
			_			
	ate: 1015 /10.25		or: CT. Best.			
Approx. Flow Ra	······································		Description:	S. 8147		
Did well de-wate	r? If ye	es, Time:\	Volume:	gal. DTW @ Sampling: _	13.05	
Time		Conductivity	Temperature	D.O. ORP		
(2400 hr.)	Volume (gal.) ph		(F)	(mg/L) (mV)		
, ,		μmhos/cm)	•	()		
0951	3.0 7.4		22.7		NAME OF THE OWNER OWNER OF THE OWNER OWNE	
0957	6.0 7.		22.4		<u>_</u>	
1003	9.0 7.	25 644	22.1	// //		
						
		LABORATORY	INFORMATION			
SAMPLE ID		RIG. PRESERV. TYP	E LABORATORY	ANALYSE	S	
C- 5		ES HCL	EUROFINS	TPH-GRO(8015)/BTEX(8260)		
	2_x 500ml ambers Y	ES NP	EUROFINS	TPH-DRO w/sgc COLUMN		
				1		
					*	
COMMENTS:						

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #9-05	04		Job Number:	17155259	
Site Address:	15900 Hesperia	an Blvd		Event Date:	10.27.17	(inclusive)
City:	San Lorenzo, (Sampler:		()
Oky.	Guil Editines,			Campler.	<u></u>	
Well ID	C-6			Date Monitored:	10.27.17	
Well Diameter	②/3 in.		1/01	ume 3/4"= 0		3"= 0.38
Total Depth	24.47 ft.			otor (VF) 4"= 0		12"= 5.80
Depth to Water	13.98 ft.	☐ Ch	eck if water colun	nn is less then 0.50) ft.	
•	10.49 x	***************************************			Estimated Purge Volume: 5	gal.
Depth to Water	w/ 80% Recharge [(H	eight of Wa	iter Column x 0.20)	+ DTW]: 16.07		
D						(2400 hrs) (2400 hrs)
Purge Equipment:			mpling Equipment		Depth to Product:	
Disposable Bailer			posable Bailer		Depth to Water:	
Stainless Steel Baile			essure Bailer		Hydrocarbon Thickness	
Stack Pump			tal Filters	***	Visual Confirmation/Pe	
Peristaltic Pump			ristaltic Pump			
QED Bladder Pump			D Bladder Pump	=======================================	Skimmer / Absorbant S	
Other:		Oli	ner:		Amt Removed from Ski	
					Amt Removed from We	
					Water Removed:	ltr
Chart Times /			144 - 44 - 0			
Start Time (purge			Weather Co	_	SUNNY	
Sample Time/Da	ate: 1050 /10.7	27.17	Water Color	LIT. BAN.	_Odor: Y /🕦 '	
Approx. Flow Ra	ite:gr	om.	Sediment D	escription:	5. S.UT,	
Did well de-wate	r? <u>No</u> If	yes, Tim	e: V	olume:	gal. DTW @ Sampling	14.15
Time			Conductivity	Tamananatura	D.O. OR	5
Time (2400 hr.)	Volume (gal.)	pH	(1)3 /mS	Temperature (D.O. OR (mg/L) (m\	
		2	µmhos/cm)		(3. –)	• •
1033		· <u>35</u> .	521	22.8		_
1036		37	527	22.5	<u> </u>	
1040	<u>50</u> 7	35	534	22.3	/-/	
			•			
			ABORATORY I			
SAMPLE ID C-		REFRIG.	PRESERV. TYPE		ANAL	
C- O	x voa vial x 500ml ambers	YES YES	HCL NP	EUROFINS EUROFINS	TPH-GRO(8015)/BTEX(8260)	
	X 500mi ambers	TES	INF	EURUFINS	TPH-DRO w/sgc COLUMN	
	<u> </u>					
COMMENTS:						
						
Add/Replaced Ga	sket Ad	d/Replaced	Bolt:	Add/Replaced Loc	ck: Add/Replace	d Plua:
raari topiacca da		vopidocu		radri repiaced Loc	m Auuri vepiaue	u i iug

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#:	Chevron #9-	0504		Job Number:	17155259	
Site Address:	15900 Hespe	rian Blvc	i.	Event Date:	10.27.17	(inclusive)
City:	San Lorenzo	, CA		Sampler:	ML	
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	X	XVF CI XVF [(Height of W: Sa Dis Pro Me Pe QE	Volumi Factor neck if water column	(VF) 4"= 0.60 n is less then 0.50 x3 case volume =	of t. Estimated Purge Volume: Time Started: Time Completed: Depth to Product: Depth to Water: Hydrocarbon Thickness: Visual Confirmation/Descript Skimmer / Absorbant Sock (c Amt Removed from Skimmer Amt Removed from Well:	galgal(2400 hrs)ftftftftftftftftftftftftftftft
Start Time (purgo Sample Time/Da Approx. Flow Ra	ate: <u>0950 / /</u>	<u>つってフィ</u> () lpm.	Weather Cor Water Color: Sediment De	cen-	Water Removed: Sunt Odor: Y / 1	ltr
Time (2400 hr.) 0938 0941	Volume (Liters) 3.4 4.2 4.8	yes, Time: pH 7.35 7.39 7.40	Conductivity (µS)/mS µmhos/cm) 1075			Gauge DTW as parameters are recorded 10:2[10.22
		L	ABORATORY IN	FORMATION		
C- 7	(#) CONTAINER (x voa vial x voa vial x x 500ml ambers	YES YES YES	PRESERV. TYPE HCL HCL NP	LANCASTER LANCASTER LANCASTER	ANALYSE TPH-GRO(8015)/BTEX(8260) TPH-GRO(8015)/BTEX(8260)/NAI TPH-DRO w/sgc COLUMN	
COMMENTS:	DEPTH PUMP	SET AT	: 11.50 Se	et		
Add/Replaced Ga	asket:	Add/Replaced	i Bolt:	Add/Replaced Loc	k: Add/Replaced Pl	ug:



WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#:	Chevron #9-	0504		Job Number:	17155259	
Site Address:	15900 Hespe	rian Blv	d.	Event Date:	10-27-17	— (inclusive)
City:	San Lorenzo	, CA		Sampler:	мС	
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	13.37 w/ 80% Recharge	CXVF CHeight of W	Volum Factor heck if water column	(VF) 4"= 0.60 n is less then 0.50 x3 case volume =	6 5"= 1.02 6"= 1.50 12"= 5.8 oft. Estimated Purge Volume:	gal. (2400 hrs) (2400 hrs) ft ft ft ft ft tricle one)
Start Time (purg Sample Time/Da Approx. Flow Ra Did well de-wate (2400 hr.)	ate: 1/50 // ate: 200 M	7.27 7.30 7-31	Sediment De	Clessoription:	SUNNY Odor: PIN Medic None tr. DTW @ Sampling:	Gauge DTW as parameters are recorded (1.49 11.49
		i	_ABORATORY IN	IFORMATION		
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES	
C- 8	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)	
	🕊 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)/NAPI	HTHALENE(8260)
	Z x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc COLUMN	
						'''
		~~~				
COMMENTS:	DEPTH PUMF	SET AT	: /	feet		
Add/Replaced Ga	asket:	Add/Replace	d Bolt:	Add/Replaced Loc	k: Add/Replaced Plu	g:



### WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Site Address: City:	Chevron #9-0504 15900 Hesperian San Lorenzo, CA	Blvd.	Job Number: 17155259  Event Date: (0.27.() (inclusive)  Sampler: (inclusive)					
Well ID Well Diameter Total Depth Depth to Water  Depth to Water  Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Peristaltic Pump QED Bladder Pump Other:	w/ 80% Recharge [(Heig	Volume Factor	or (VF) 4"= 0. n is less then 0.50 x3 case volume =	0 ft. Estimated Purge Volume:	gal. (2400 hrs)ftftftftftftftft			
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 0742 2748	ate: <u>0805 / 10-2</u>	Sediment De es, Time: Vo	BROWN	Odor: Y /N	17.76			
		LABORATORY IN	FORMATION					
SAMPLE ID C- 9	. 🕢 x voa vial Y	FRIG. PRESERV. TYPE 'ES HCL 'ES NP	LABORATORY LANCASTER LANCASTER	ANALYSES TPH-GRO(8015)/BTEX(8260) TPH-DRO w/sgc COLUMN	5			
COMMENTS:  Add/Replaced Ga	sket: Add/F	Replaced Bolt:	Add/Replaced Loc	k: Add/Replaced Plu	ıq:			



### WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #9-0			Job Number:	17155259
Site Address:	15900 Hespe	rian Blv	<u>d.</u>	Event Date:	(inclusive)
City:	San Lorenzo,	CA	***************************************	Sampler:	uL
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:	w/ 80% Recharge	XVF	Volur Facto heck if water column 2 = 2 - 5	or (VF) 4"= 0. n is less then 0.50 x3 case volume =	66 5"= 1.02 6"= 1.50 12"= 5.80
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) OLEOR	volume (gal.)	gpm.	Weather Con Water Color: Sediment De:  Conductivity (IS) mS  µmnos/cm)  ISYY  IS34  IS34	BRown scription:	Odor: Y / D  //'gwt  _gal. DTW @ Sampling:
	-		_ABORATORY IN	EORMATION	
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
C- 10	x voa viai	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc COLUMN
COMMENTS:					
Add/Replaced Ga	sket: A	Add/Replace	d Bolt:	Add/Replaced Loc	k: Add/Replaced Plug:



### WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#:	Chevron #9-	0504		Job Number:	17155259		
Site Address:	15900 Hespe	rian Blv	d.	Event Date:	10-27-1	$\overline{)}$	- (inclusive)
City:	San Lorenzo			Sampler:	me		(
					1-12/		
Well ID	C-	_		ate Monitored:	10-27-1	<u>)                                    </u>	_
Well Diameter	<b>2/3</b> in	-	Volume		_	0.17 3"= 0.38	
Total Depth	24.71 ft.	-	Factor			1.50 12"= 5.80	
Depth to Water	9.40 ft.		Check if water column			ume: 7-5	aal
Depth to Water			Vater Column x 0.20) +				
Purge Equipment:			Sampling Equipment		- H	ed:	
	Y		Sampling Equipment:	/		ıct:	
Disposable Bailer Stainless Steel Baile			Disposable Bailer			r:	
	ei		Pressure Bailer		19	hickness:	
Stack Pump			Metal Filters	<del></del> ,	II -	ation/Description	
Peristaltic Pump			Peristaltic Pump				
QED Bladder Pump			ED Bladder Pump	<del></del>	H	orbant Sock (circ	,
		· ·	Other:			from Skimmer:	
						from Well:	
~					vvater Remove	d:	Itr
Approx. Flow Ra Did well de-wate  Time (2400 hr.)  Olyly  Olys 7  2658		pH 7, 42 7, 47 7, 44	Sediment De  Conductivity (µS) mS µmnos/cm) 1030 (039	•	D.O. (mg/L)	ORP (mV)	Gauge DTV as paramete are recorder
······································			LABORATORY IN	FORMATION			
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY		ANALYSES	
C- //	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BT	EX(8260)	
	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BT		THALENE(8260)
	2 x 500ml ambers	YES	NP NP	LANCASTER	TPH-DRO w/sgc CO	LUMN	
*****						-	
		<u> </u>					
<del></del> :		3 22 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
COMMENTS:	DEPTH PUMP	SETA	ř <del> </del>				
						· · · · · · · · · · · · · · · · · · ·	*********
Add/Replaced Ga	asket:	Add/Replace	ed Bolt:	Add/Replaced Loc	k: Add	d/Replaced Plug:	

# Chevron California Region Analysis Request/Chain of Custody

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	nformatio						Ma	trix		Γ				Ar	nalys	ses l	Requ	uest	ed				SCF	R #:		
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# Chevron California Region Analysis Request/Chain of Custody

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277-06 Lancaster La Environment			Acct	.#				G	roup Ins		s on re	verse s	ide com	Sai	mple a	rcled n	umber	3.						2012
	Informatio	on .					Ma	trix		T				Ar	nalys	es	Real	Jest	ed		- 111-			
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			abiii, C	M 34	700	Ś				aine	l		ca G	Gel (			ا	ا ح			100	- 1	8021 MTBE Co	nfirmation
Cosulant Project Marding, deanna	@grinc.co	m								Total Number of Containers	8021	8015 🔯	without Silica	TPH-DRO 8015 with Silica Gel Cleanup			Method	Method					Confirm highest	
Consultant Phone#444 x180							e	S	Ą	<u>چ</u>	8021	8015	rithou	ith S		Oxygenates	2	2					Confirm all hits	
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EDFFLAT (default) Other:				Temperature Upon Receipt°C						ct?	Yes	No												

ATTACHMENT B
Certified Laboratory Analysis Reports and
Chain-of-Custody Documents









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### **ANALYSIS REPORT**

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Report Date: November 10, 2017 16:49

Project: 90504

Account #: 10906 Group Number: 1869146 PO Number: 0015235605 Release Number: CMACLEOD State of Sample Origin: CA

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

Electronic Copy To Chevron
Electronic Copy To Stantec
Electronic Copy To Gettler-Ryan Inc.

Attn: Jaff Auchterlonie Attn: Laura Viesselman Attn: Gettler Ryan

Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# Lancaster Laboratories Environmental







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### **SAMPLE INFORMATION**

Client Sample Description	Sample Collection	ELLE#
0.4 T 4 T 4 0 0 T 1 1 1 1 1 4 4	Date/Time	0001010
QA-T-171027 NA Water	10/27/2017	9291342
C-1-W-171027 Grab Groundwater	10/27/2017 12:05	9291343
C-2-W-171027 Grab Groundwater	10/27/2017 13:00	9291344
C-3-W-171027 Grab Groundwater	10/27/2017 13:15	9291345
C-4-W-171027 Grab Groundwater	10/27/2017 09:30	9291346
C-5-W-171027 Grab Groundwater	10/27/2017 10:15	9291347
C-6-W-171027 Grab Groundwater	10/27/2017 10:50	9291348
C-7-W-171027 Grab Groundwater	10/27/2017 09:50	9291349
C-8-W-171027 Grab Groundwater	10/27/2017 11:50	9291350
C-9-W-171027 Grab Groundwater	10/27/2017 08:05	9291351
C-10-W-171027 Grab Groundwater	10/27/2017 06:25	9291352
C-11-W-171027 Grab Groundwater	10/27/2017 07:15	9291353

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



WW 9291342

1869146

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Sample Description: **QA-T-171027 NA Water** 

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Chevron

ELLE Sample #: **ELLE Group #:** 

Matrix: Water

**Project Name:** 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260	В	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	atiles	SW-846 8015	В	ug/l	ug/l	
01728	TPH-GRO N. CA water C	6-C12	n.a.	N.D.	50	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					
10945	BTEX 8260B Water	SW-846 8260B	1	F173052AA	11/01/2017 12:38	Anthony H Downey	1					
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F173052AA	11/01/2017 12:38	Anthony H Downey	1					
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17305B20A	11/01/2017 12:20	Brett W Kenyon	1					
01146	GC VOA Water Prep	SW-846 5030B	1	17305B20A	11/01/2017 12:20	Brett W Kenyon	1					



WW 9291343

1869146

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Sample Description: C-1-W-171027 Grab Groundwater

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Matrix: Groundwater

**ELLE Sample #:** 

**ELLE Group #:** 

Chevron

Project Name: 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 12:05

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260	)B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	atiles	SW-846 8015	5B	ug/l	ug/l	
01728	TPH-GRO N. CA water Co	S-C12	n.a.	N.D.	50	1
GC Pet	roleum arbons w/Si	SW-846 8015	5B	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w. The reverse surrogate, ca		n.a. nt at <1%.	130	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 13:43 10945 Anthony H Downey 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 13:43 Anthony H Downey 1 TPH-GRO N. CA water C6-C12 SW-846 8015B 17305B20A 11/01/2017 16:53 Brett W Kenyon 01728 1 1 GC VOA Water Prep SW-846 5030B 17305B20A 11/01/2017 16:53 Brett W Kenyon 01146 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/08/2017 23:15 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180



WW 9291344

1869146

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C-2-W-171027 Grab Groundwater Sample Description:

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Matrix: Groundwater

**ELLE Sample #:** 

**ELLE Group #:** 

Chevron

**Project Name:** 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 13:00

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260	)B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	atiles	SW-846 8015	5B	ug/l	ug/l	
01728	TPH-GRO N. CA water Co	6-C12	n.a.	110	50	1
	roleum arbons w/Si	SW-846 8015	5B	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w The reverse surrogate, ca		n.a. nt at <1%.	N.D.	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 14:04 10945 Anthony H Downey 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 14:04 Anthony H Downey 1 TPH-GRO N. CA water C6-C12 SW-846 8015B 17305B20A 11/01/2017 17:21 Brett W Kenyon 01728 1 1 GC VOA Water Prep SW-846 5030B 17305B20A 11/01/2017 17:21 Brett W Kenyon 01146 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/08/2017 23:36 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 1 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180



WW 9291345

1869146

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C-3-W-171027 Grab Groundwater Sample Description:

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Matrix: Groundwater

**ELLE Sample #:** 

**ELLE Group #:** 

Chevron

**Project Name:** 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 13:15

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 826	0B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vo	latiles	SW-846 801	5B	ug/l	ug/l	
01728	TPH-GRO N. CA water C	6-C12	n.a.	N.D.	50	1
	troleum carbons w/Si	SW-846 801	5B	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 v The reverse surrogate, ca		n.a. ent at <1%.	N.D.	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 14:26 10945 Anthony H Downey 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 14:26 Anthony H Downey 1 TPH-GRO N. CA water C6-C12 SW-846 8015B 17305B20A 11/01/2017 17:48 Brett W Kenyon 01728 1 1 GC VOA Water Prep SW-846 5030B 17305B20A 11/01/2017 17:48 Brett W Kenyon 01146 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/08/2017 23:57 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180



WW 9291346

1869146

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Sample Description: C-4-W-171027 Grab Groundwater

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Matrix: Groundwater

**ELLE Sample #:** 

**ELLE Group #:** 

Chevron

Project Name: 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 09:30

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260	)B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles SW-846 8015B			5B	ug/l	ug/l	
01728	TPH-GRO N. CA water Co	6-C12	n.a.	N.D.	50	1
GC Petroleum SW-846 8015 Hydrocarbons w/Si		5B	ug/l	ug/l		
06610	TPH-DRO CA C10-C28 w The reverse surrogate, ca		n.a. nt at <1%.	N.D.	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 14:47 10945 Anthony H Downey 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 14:47 Anthony H Downey 1 TPH-GRO N. CA water C6-C12 SW-846 8015B 17305B20A 11/01/2017 18:15 Brett W Kenyon 01728 1 1 GC VOA Water Prep SW-846 5030B 17305B20A 11/01/2017 18:15 Brett W Kenyon 01146 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/09/2017 00:19 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180



WW 9291347

1869146

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C-5-W-171027 Grab Groundwater Sample Description:

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Matrix: Groundwater

**ELLE Sample #:** 

**ELLE Group #:** 

Chevron

**Project Name:** 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 10:15

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260	)B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles SW-846 8015B			5B	ug/l	ug/l	
01728	TPH-GRO N. CA water Co	6-C12	n.a.	N.D.	50	1
GC Petroleum SW-846 8015 Hydrocarbons w/Si		5B	ug/l	ug/l		
06610	TPH-DRO CA C10-C28 w The reverse surrogate, ca		n.a. nt at <1%.	N.D.	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 15:09 10945 Anthony H Downey 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 15:09 Anthony H Downey 1 TPH-GRO N. CA water C6-C12 SW-846 8015B 17306B20A 11/02/2017 12:15 Brett W Kenyon 01728 1 1 GC VOA Water Prep SW-846 5030B 17306B20A 11/02/2017 12:15 Brett W Kenyon 01146 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/09/2017 00:40 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 1 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180



WW 9291348

1869146

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Sample Description: C-6-W-171027 Grab Groundwater

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Matrix: Groundwater

**ELLE Sample #:** 

**ELLE Group #:** 

Chevron

Project Name: 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 10:50

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260	)B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	atiles	SW-846 8015	5B	ug/l	ug/l	
01728	TPH-GRO N. CA water Co	6-C12	n.a.	N.D.	50	1
GC Pet	roleum arbons w/Si	SW-846 8015	5B	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w The reverse surrogate, ca		n.a. nt at <1%.	N.D.	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 15:31 10945 Anthony H Downey 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 15:31 Anthony H Downey 1 TPH-GRO N. CA water C6-C12 SW-846 8015B 17306B20A 11/02/2017 12:43 Brett W Kenyon 01728 1 1 GC VOA Water Prep SW-846 5030B 17306B20A 11/02/2017 12:43 Brett W Kenyon 01146 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/09/2017 01:02 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 1 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180

WW 9291349

1869146

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Sample Description: C-7-W-171027 Grab Groundwater

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Matrix: Groundwater

**ELLE Sample #:** 

**ELLE Group #:** 

Chevron

Project Name: 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 09:50

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260	)B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	atiles	SW-846 8015	5B	ug/l	ug/l	
01728	TPH-GRO N. CA water Co	6-C12	n.a.	410	50	1
	roleum arbons w/Si	SW-846 8015	5B	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w The reverse surrogate, ca		n.a. nt at <1%.	94	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 15:53 Anthony H Downey 10945 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 15:53 Anthony H Downey 1 TPH-GRO N. CA water C6-C12 SW-846 8015B 17310B20A 11/06/2017 13:16 Marie D Beamenderfer 01728 1 1 GC VOA Water Prep SW-846 5030B 17310B20A 11/06/2017 13:16 Marie D Beamenderfer 01146 1 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/09/2017 02:06 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180



WW 9291350

1869146

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Sample Description: C-8-W-171027 Grab Groundwater

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

ELLE Group #: 18
Matrix: Groundwater

ELLE Sample #:

Chevron

Project Name: 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 11:50

CAT No.	Analysis Name	CAS	S Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B		ug/l	ug/l	
10945	Benzene	71-4	43-2	0.6	0.5	1
10945	Ethylbenzene	100-	-41-4	9	0.5	1
10945	Naphthalene	91-2	20-3	6	1	1
10945	Toluene	108-	-88-3	0.7	0.5	1
10945	Xylene (Total)	1330	0-20-7	1	0.5	1
GC Vol	atiles	SW-846 8015B		ug/l	ug/l	
01728	TPH-GRO N. CA water C	6-C12 n.a.		7,400	500	10
	roleum arbons w/Si	SW-846 8015B		ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w The reverse surrogate, ca			1,600	50	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
10945	BTEX & Naphthalene 8260B	SW-846 8260B	1	F173052AA	11/01/2017 18:46	Anthony H Downey	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F173052AA	11/01/2017 18:46	Anthony H Downey	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17306B20A	11/02/2017 15:28	Brett W Kenyon	10
01146	GC VOA Water Prep	SW-846 5030B	1	17306B20A	11/02/2017 15:28	Brett W Kenyon	10
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	173060039A	11/09/2017 02:28	Amy Lehr	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	173060039A	11/03/2017 16:18	Kate E Lutte	1



WW 9291351

1869146

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C-9-W-171027 Grab Groundwater Sample Description:

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Matrix: Groundwater

**ELLE Sample #:** 

**ELLE Group #:** 

Chevron

**Project Name:** 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 08:05

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 826	0B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vo	latiles	SW-846 801	5B	ug/l	ug/l	
01728	TPH-GRO N. CA water C	6-C12	n.a.	N.D.	50	1
	troleum carbons w/Si	SW-846 801	5B	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w The reverse surrogate, ca		n.a. ent at <1%.	N.D.	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 16:15 10945 Anthony H Downey 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 16:15 Anthony H Downey 1 TPH-GRO N. CA water C6-C12 SW-846 8015B 17306B20A 11/02/2017 13:10 Brett W Kenyon 01728 1 1 GC VOA Water Prep SW-846 5030B 17306B20A 11/02/2017 13:10 Brett W Kenyon 01146 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/09/2017 02:49 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180

WW 9291352

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Sample Description: C-10-W-171027 Grab Groundwater

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

ELLE Group #: 1869146 Matrix: Groundwater

**ELLE Sample #:** 

Chevron

Project Name: 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 06:25

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260	)B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	atiles	SW-846 8015	5B	ug/l	ug/l	
01728	TPH-GRO N. CA water Co	6-C12	n.a.	N.D.	50	1
	roleum arbons w/Si	SW-846 8015	5B	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w The reverse surrogate, ca		n.a. nt at <1%.	N.D.	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 16:36 10945 Anthony H Downey 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 16:36 Anthony H Downey 1 TPH-GRO N. CA water C6-C12 SW-846 8015B 17306B20A 11/02/2017 13:38 Brett W Kenyon 01728 1 1 GC VOA Water Prep SW-846 5030B 17306B20A 11/02/2017 13:38 Brett W Kenyon 01146 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/09/2017 03:10 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180

WW 9291353

1869146

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Sample Description: C-11-W-171027 Grab Groundwater

Facility# 90504 Job# 17155259 GRD

15900 Hesperian Blvd-San Lorenz T0600100302

Matrix: Groundwater

**ELLE Sample #:** 

**ELLE Group #:** 

Chevron

Project Name: 90504

Submittal Date/Time: 10/31/2017 09:45 Collection Date/Time: 10/27/2017 07:15

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260	)B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	atiles	SW-846 8015	5B	ug/l	ug/l	
01728	TPH-GRO N. CA water Co	6-C12	n.a.	N.D.	50	1
	roleum arbons w/Si	SW-846 8015	5B	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w The reverse surrogate, ca		n.a. nt at <1%.	N.D.	50	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** Method CAT **Analysis Name** Trial# Batch# **Analysis** Dilution Analyst No. Date and Time Factor BTEX 8260B Water SW-846 8260B F173052AA 11/01/2017 16:57 10945 Anthony H Downey 1 1 01163 GC/MS VOA Water Prep SW-846 5030B F173052AA 11/01/2017 16:57 Anthony H Downey 1 11/02/2017 14:05 TPH-GRO N. CA water C6-C12 SW-846 8015B 17306B20A Brett W Kenyon 01728 1 1 GC VOA Water Prep SW-846 5030B 17306B20A 11/02/2017 14:05 Brett W Kenyon 01146 1 TPH-DRO CA C10-C28 w/ Si Gel SW-846 8015B 173060039A 11/09/2017 03:32 Amy Lehr 06610 1 1 Low Vol Ext(W) w/SG SW-846 3510C 173060039A 11/03/2017 16:18 Kate E Lutte 1 11180

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### **Quality Control Summary**

Client Name: Chevron Group Number: 1869146

Reported: 11/10/2017 16:49

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**

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: F173052AA	Sample numb	ber(s): 9291342-9291353
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Naphthalene	N.D.	1
Toluene	N.D.	0.5
Xylene (Total)	N.D.	0.5
Batch number: 17305B20A	Sample numl	ber(s): 9291342-9291346
TPH-GRO N. CA water C6-C12	N.D.	50
Batch number: 17306B20A	Sample numl	ber(s): 9291347-9291348,9291350-9291353
TPH-GRO N. CA water C6-C12	N.D.	50
Batch number: 17310B20A	Sample numl	ber(s): 9291349
TPH-GRO N. CA water C6-C12	N.D.	50
Batch number: 173060039A	Sample numl	ber(s): 9291343-9291353
TPH-DRO CA C10-C28 w/ Si Gel	N.D.	50

#### 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: F173052AA	Sample number	(s): 9291342-9	291353						
Benzene	20	18.37			92		78-120		
Ethylbenzene	20	17.3			87		78-120		
Naphthalene	20	15.46			77		59-120		
Toluene	20	17.32			87		80-120		
Xylene (Total)	60	53.93			90		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 17305B20A	Sample number	(s): 9291342-9	291346						
TPH-GRO N. CA water C6-C12	1100	1014.62	1100	1026.23	92	93	80-120	1	30
Batch number: 17306B20A	Sample number	(s): 9291347-9	291348,9291350-9	9291353					
TPH-GRO N. CA water C6-C12	1100	1037.26	1100	1018.16	94	93	80-120	2	30
Batch number: 17310B20A	Sample number	(s): 9291349							

^{*-} Outside of specification

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

⁽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.

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### **Quality Control Summary**

Client Name: Chevron Group Number: 1869146

Reported: 11/10/2017 16:49

#### 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
TPH-GRO N. CA water C6-C12	1100	1064.8	1100	1047.47	97	95	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 173060039A	Sample number(s): 9291343-9291353								
TPH-DRO CA C10-C28 w/ Si Gel	1600	1219.12	1600	1061.08	76	66	40-105	14	20

#### 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: F173052AA	Sample number	er(s): 9291342-	9291353 U	NSPK: P286164	ļ					
Benzene	N.D.	20	18.96	20	18.98	95	95	78-120	0	30
Ethylbenzene	N.D.	20	18.05	20	18.62	90	93	78-120	3	30
Naphthalene	N.D.	20	14.04	20	14.06	70	70	59-120	0	30
Toluene	N.D.	20	18.38	20	18.56	92	93	80-120	1	30
Xylene (Total)	N.D.	60	58.4	60	58.62	97	98	80-120	0	30

#### **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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: BTEX 8260B Water

Batch number: F173052AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9291342	105	103	96	93
9291343	107	98	96	93
9291344	105	102	95	94
9291345	106	104	97	93
9291346	106	101	95	91
9291347	103	100	94	92
9291348	106	101	96	93
9291349	101	95	99	96
9291350	101	96	99	101

^{*-} Outside of specification

P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

⁽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.

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## **Quality Control Summary**

Client Name: Chevron Group Number: 1869146

Reported: 11/10/2017 16:49

#### **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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: BTEX 8260B Water

Batch number: F173052AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9291351	105	98	98	91
9291352	105	96	95	93
9291353	108	100	97	94
Blank	105	99	97	92
LCS	103	102	95	96
MS	102	95	97	100
MSD	100	101	98	102
l imits:	80-120	80-120	80-120	80-120

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

Batch number: 17305B20A Trifluorotoluene-F

	TillidorotoldCTC-T	
9291342	77	
9291343	84	
9291344	82	
9291345	88	
9291346	82	
Blank	86	
LCS	94	
LCSD	96	
-		

Limits: 63-135

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

Batch number: 17306B20A Trifluorotoluene-F

	miliuorotoluene-r
9291347	88
9291348	88
9291350	112
9291351	88
9291352	83
9291353	87
Blank	85
LCS	97
LCSD	95
Limits:	63-135

*- Outside of specification

- (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.

P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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## **Quality Control Summary**

Client Name: Chevron Group Number: 1869146

Reported: 11/10/2017 16:49

#### **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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

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

Batch number: 17310B20A

	Trifluorotoluene-F	
9291349	96	
Blank	83	
LCS	98	
LCSD	92	

Limits: 63-135

Analysis Name: TPH-DRO CA C10-C28 w/ Si Gel

Batch number: 173060039A

	Orthoterphenyl
9291343	70
9291344	64
9291345	74
9291346	71
9291347	69
9291348	76
9291349	68
9291350	69
9291351	66
9291352	74
9291353	73
Blank	81
LCS	84
LCSD	73
Limits:	42-126

LIIIII.3. <del>7</del>2-120

P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

^{*-} Outside of specification

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

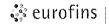
⁽²⁾ The unspiked result was more than four times the spike added.

# Chevron California Region Analysis Request/Chain of Custody

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# Chevron California Region Analysis Request/Chain of Custody

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EDFFLAT (default) Other: _						mper									°C		Cu	ıstoc	dy Sea	als Ir	 ntact	 t?	es	No



Lancaster Laboratories
Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID:

199379

Group Number(s): 1869146

Client: CA Office

**Delivery and Receipt Information** 

Delivery Method:

BASC

Arrival Timestamp:

10/31/2017 9:45

Number of Packages:

<u>6</u>

Number of Projects:

<u>6</u>

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 Yes Trip Blank Type:

HCL

Samples Intact: Missing Samples:

No

Extra Samples:

No

Discrepancy in Container Qty on COC:

Yes

Unpacked by Timothy Cubberley (6520) at 12:42 on 10/31/2017

Samples Chilled Details

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler#	Thermometer ID	Corrected Temp	Therm. Type	<u>Ice Type</u>	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.9	DT	Wet	Υ	Bagged	N
2	DT131	0.4	DT	Wet	Υ	Bagged	N
3	DT131	2.4	DT	Wet	Υ	Bagged	N
4	DT131	1.0	DΤ	Wet	Y	Bagged	N
5	DT131	3.9	DT	Wet	Υ	Bagged	N
	DT131	2.0	DT	Wet	Υ	Bagged	N
6	ונווע	۷.0					

### **Container Quantity Discrepancy Details**

Sample ID on COC

Container Qty. Received

Container Qty. on COC

Comments

See below

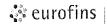
6

8

Only samples C-3 and C-7 rec'd all their samples.

General Comments:

Missing a cooler.



Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID:

199523

Group Number(s): 1869146

Client: CA Office

Delivery and Receipt Information

Delivery Method:

**BASC** 

Arrival Timestamp:

11/01/2017 9:50

Number of Packages:

<u>12</u>

Number of Projects:

4

State/Province of Origin:

<u>CA</u>

**Arrival Condition Summary** 

Shipping Container Sealed:

Discrepancy in Container Qty on COC:

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:

N/A

Samples Chilled:

Yes

Total Trip Blank Qty:

0

Paperwork Enclosed:

Yes

Air Quality Samples Present:

No

Samples Intact:

Yes No

Missing Samples:

No

Extra Samples:

No

Unpacked by Timothy Cubberley (6520) at 12:38 on 11/01/2017

### Samples Chilled Details

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler#	Thermometer ID	Corrected Temp	Therm. Type	<u>Ice Type</u>	Ice Present?	Ice Container	Elevated Temp?
1	DT131	0.5	DT	Wet	Υ	Bagged	N
2	DT131	0.7	DT	Wet	Υ	Bagged	N
3	DT131	0.2	DT	Wet	Y	Bagged	N
4	DT131	0.4	DT	Wet	Υ	Bagged	N
5	DT131	0.8	DT	Wet	Υ	Bagged	N
6	DT131	0.9	DT	Wet	Υ	Bagged	N
7	DT131	0.3	DT	Wet	Y	Bagged	· N
8	DT131	0.5	DT	Wet	Υ	Bagged	N
9	DT131	1.8	DT	Wet	Y	Bagged	N
10	DT131	0.6	DT	Wet	Υ	Bagged	N
	DT131	2.4	DT	Wet	Y	Bagged	N
11			DT	Wet	Y	Bagged	N
12	DT131	1.7	D1	1400	,	33	

General Comments:

Rec'd missing cooler.



## **Explanation of Symbols and Abbreviations**

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

BMQL	Below Minimum Quantitation Level	mg	milligram(s)
С	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
<b>CP Units</b>	cobalt-chloroplatinate units	N.D.	non-detect
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	μg	microgram(s)
m3	cubic meter(s)	μL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	less than		
>	greater than		
ppm		be equivalent to milli	kilogram (mg/kg) or one gram per million grams. For grams per liter (mg/l), because one liter of water has a weight uivalent to one microliter per liter of gas.
ppb	parts per billion		
Dry weight basis			oisture content. This increases the analyte weight ample without moisture. All other results are reported on an

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.



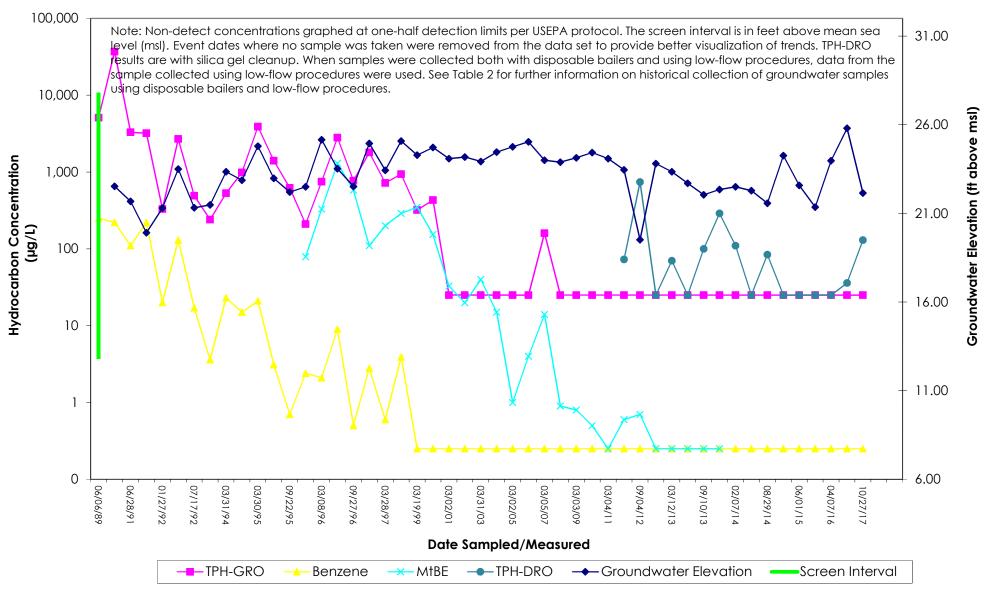
# **Data Qualifiers**

Qualifier	Definition
С	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
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)
Р	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.
Z	Laboratory Defined - see analysis report

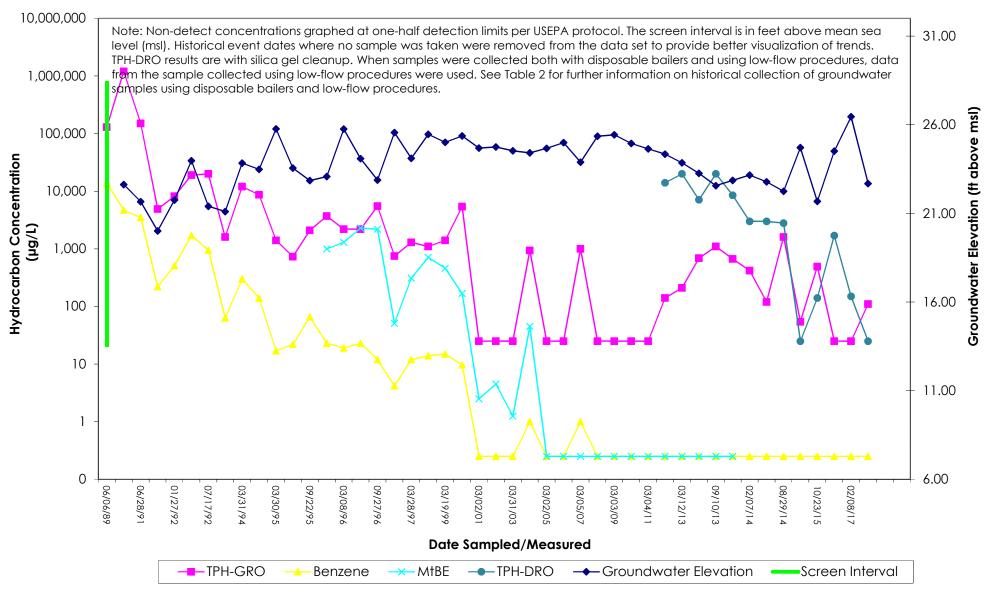
Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

ATTACHMENT C Hydrographs

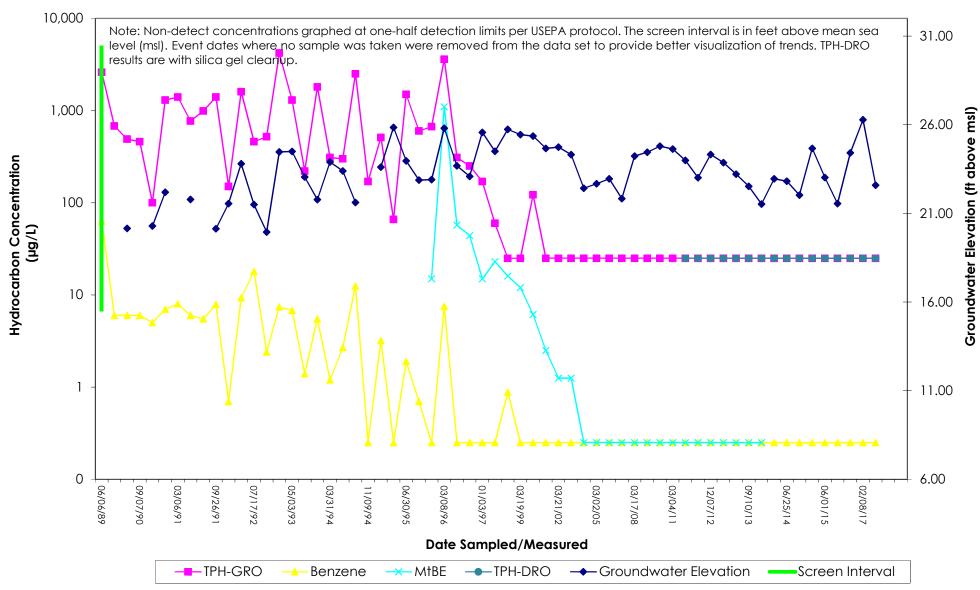
#### C-1 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



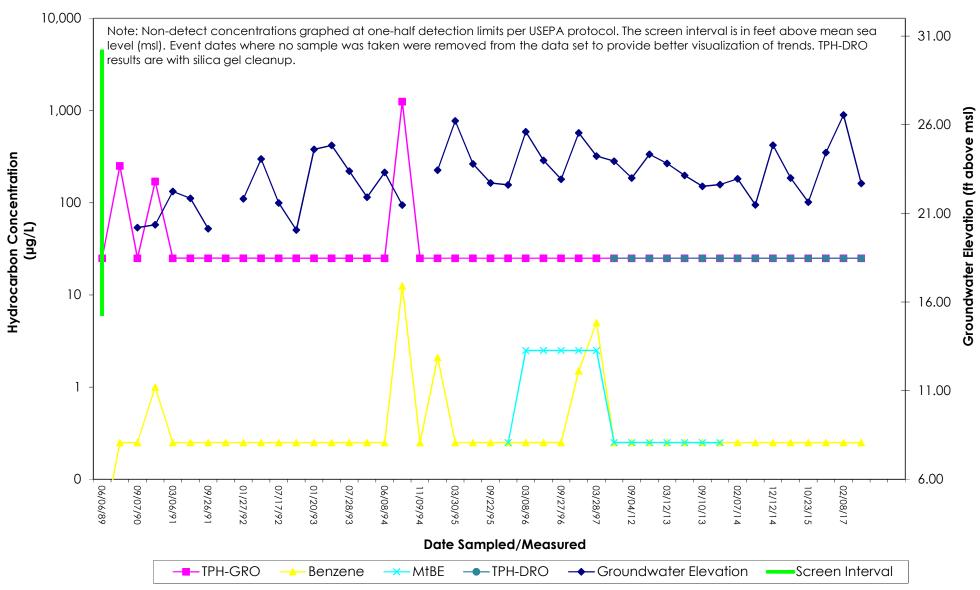
#### C-2 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



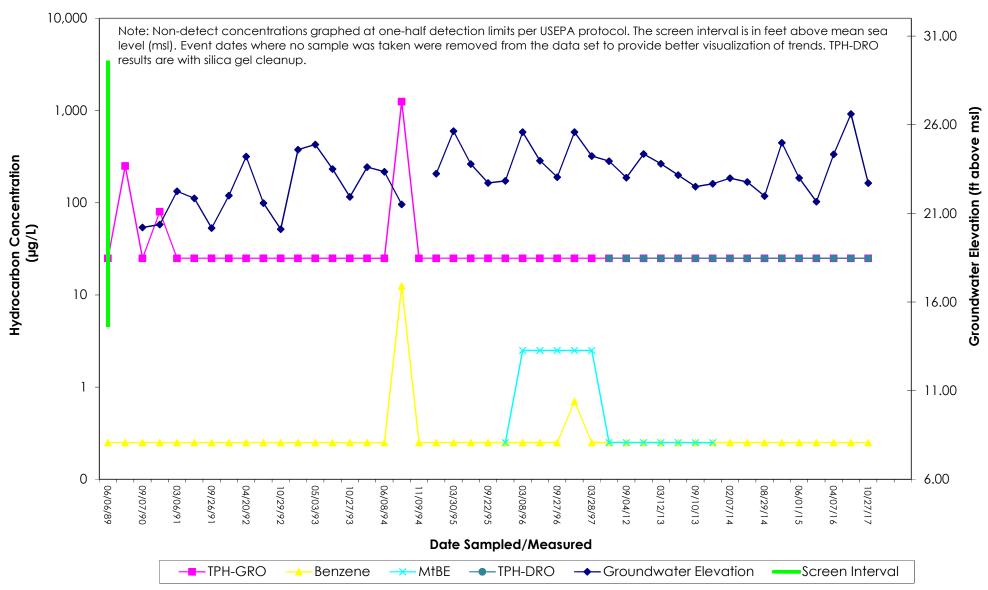
#### C-3 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



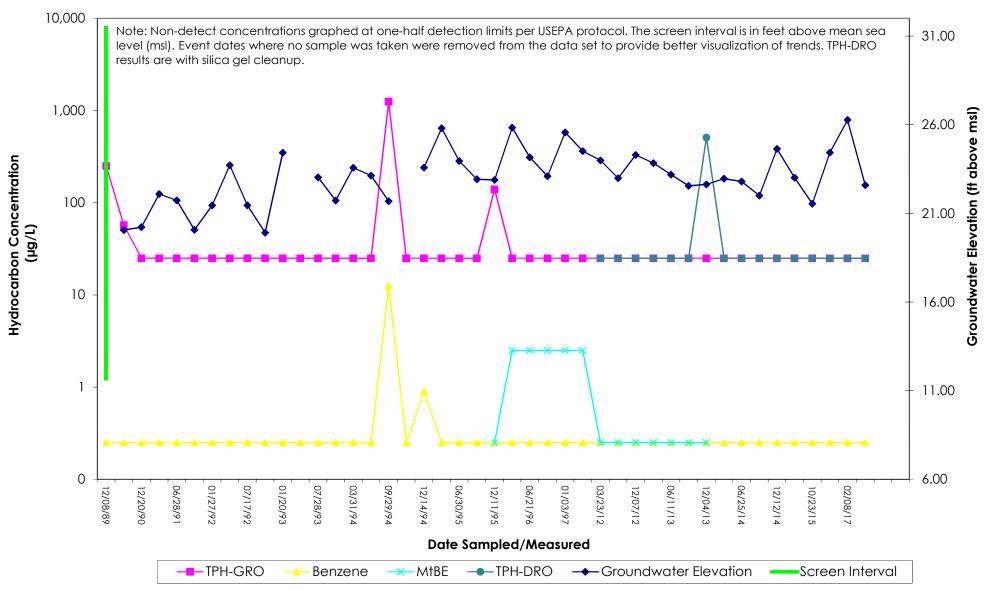
#### C-4 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



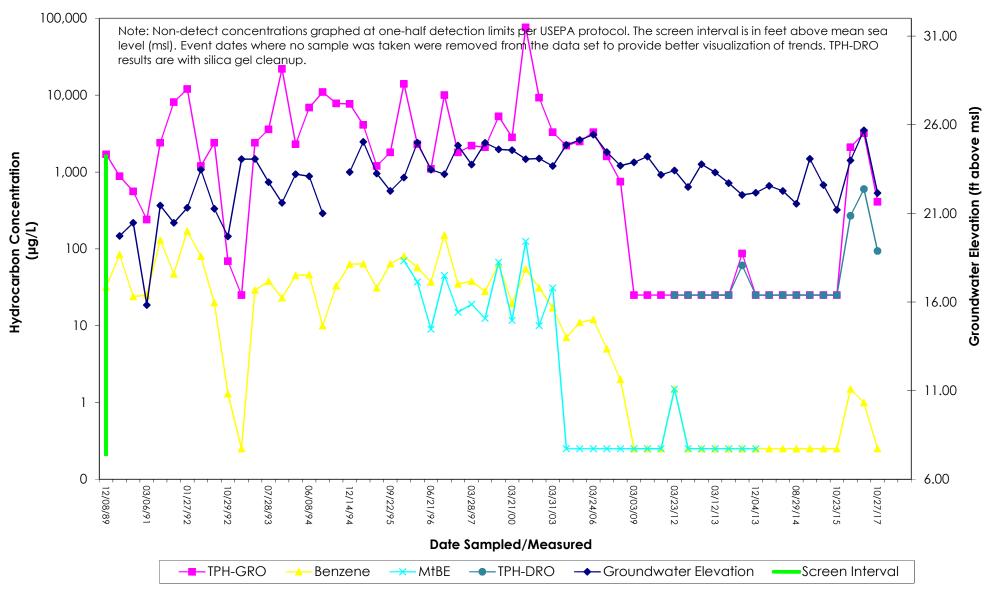
### C-5 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



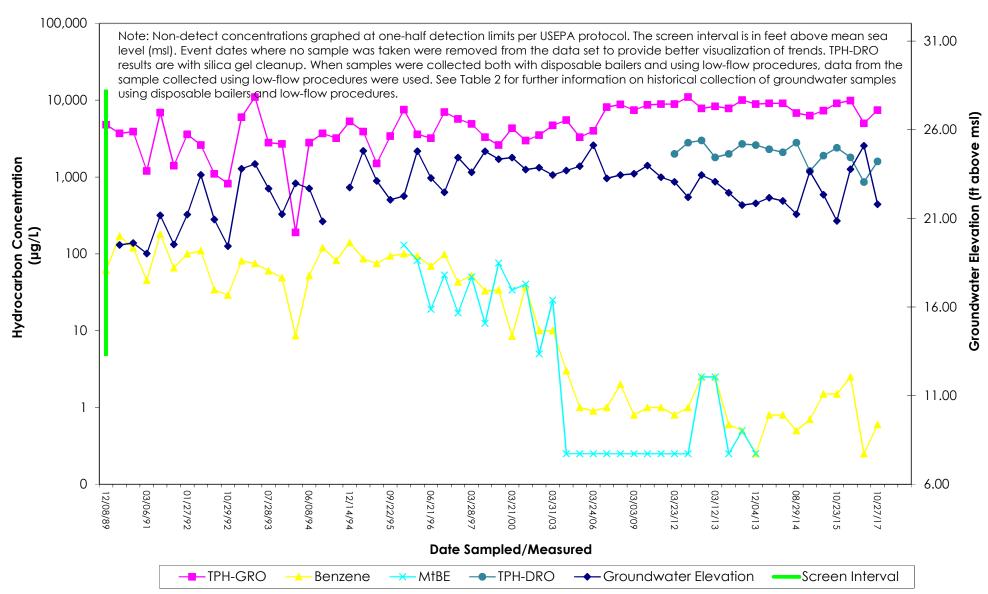
#### C-6 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



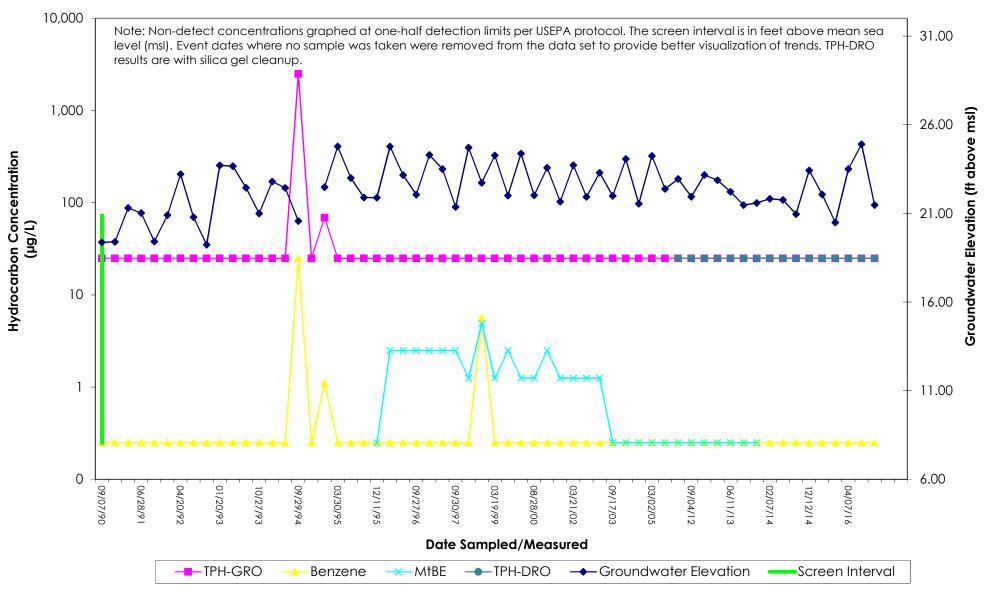
#### C-7 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



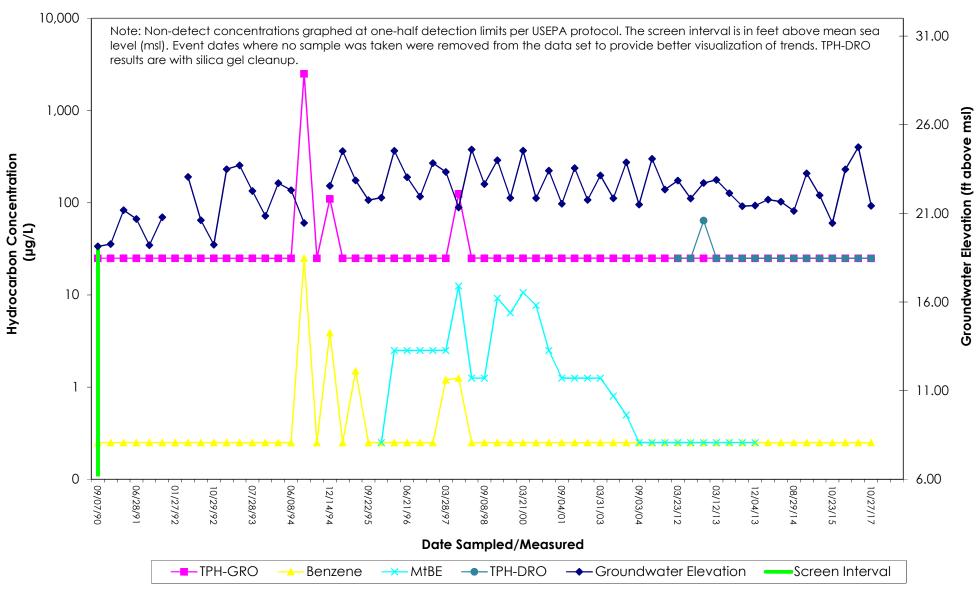
#### C-8 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



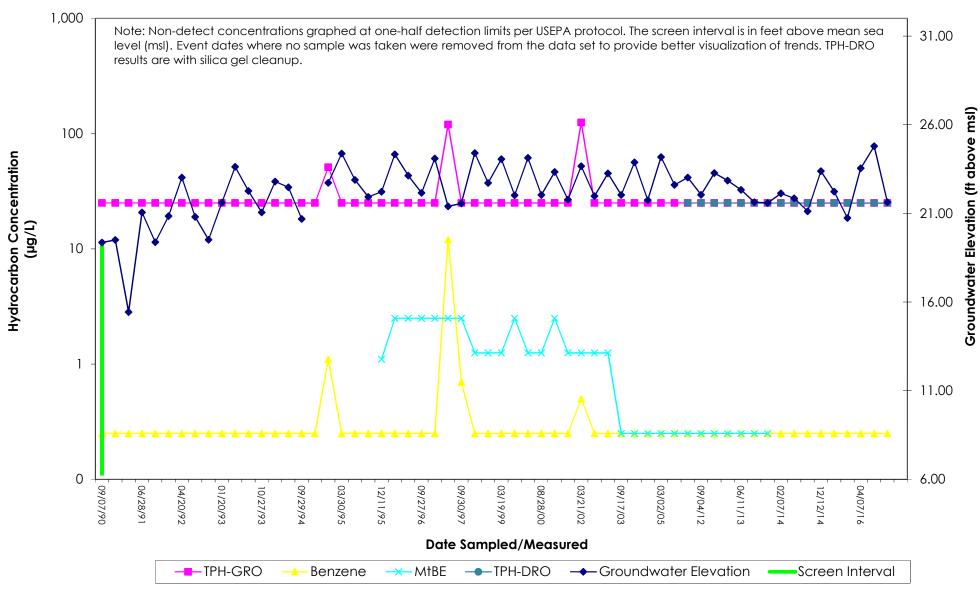
#### C-9 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



#### C-10 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



### C-11 TPH-GRO, TPH-DRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



ATTACHMENT D
Third Quarter 2016 LNAPL Monitoring Report and
Case Closure Request

#### Third Quarter 2016 LNAPL Monitoring Report and Case Closure Request

Chevron-branded Service Station 90504 15900 Hesperian Boulevard San Lorenzo, California



Prepared for: Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583

Prepared by: Stantec Consulting Services Inc. 15575 Los Gatos Blvd., Building C Los Gatos, CA 95032

October 28, 2016



Carryl MacLeod
Project Manager
Marketing Business Unit

Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 842-3201 CMacleod@chevron.com

October 28, 2016

Mr. Mark Detterman Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

Dear Mr. Detterman:

Attached for your review is the *Third Quarter 2016 LNAPL Monitoring Report and Case Closure Request* for Chevron-branded service station 90504, located at 15900 Hesperian Boulevard in San Lorenzo, California. This report was prepared by Stantec Consulting Services Inc. (Stantec), upon whose assistance and advice I have relied. I declare under penalty of perjury that the information and/or recommendations contained in the attached report are true and correct, to the best of my knowledge.

If you should have any further questions, please do not hesitate to contact me or the Stantec project manager, Travis Flora, at (408) 356-6124 ext. 238, or <a href="mailto:travis.flora@stantec.com">travis.flora@stantec.com</a>.

Sincerely,

Carryl MacLeod Project Manager



October 28, 2016

Attention: Mr. Mark Detterman

Alameda County Environmental Health

1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502

Reference: Third Quarter 2016 LNAPL Monitoring Report and Case Closure Request

Chevron-branded Service Station 90504

15900 Hesperian Boulevard, San Lorenzo, California

Dear Mr. Detterman:

On behalf of Chevron Environmental Management Company (CEMC), Stantec Consulting Services Inc. (Stantec) is pleased to submit the *Third Quarter 2016 LNAPL Monitoring Report and Case Closure Request* for Chevron-branded service station 90504, which is located at 15900 Hesperian Boulevard, San Lorenzo, Alameda County, California (Site - shown on **Figure 1** and **Figure 2**). This report is presented in four sections: Site Background, LNAPL Monitoring, Low-Threat Closure Evaluation, and Conclusions and Recommendations.

#### SITE BACKGROUND

The Site is an active Chevron-branded service station located on the eastern corner at the intersection of Hesperian Boulevard and Post Office Road in San Lorenzo, California. The Site has been occupied by a service station since approximately 1969. Current Site features include three 10,000-gallon fiberglass gasoline underground storage tanks (USTs), one 10,000-gallon fiberglass diesel UST, three fuel dispenser islands, and a station building with three service bays. The USTs are located in the southern portion of the Site, the fuel dispenser islands are located in the central portion of the Site, and the station building is located in the northeastern portion of the Site. In 1983, two 10,000-gallon and one 5,000-gallon steel USTs were replaced with the current fiberglass tanks. In January 1994, the fuel dispenser islands were replaced, and in March 1994, a 1,000-gallon steel waste oil UST located northeast of the station building was replaced with a 1,000-gallon fiberglass UST, which was later removed in 2001.

Land use near the Site consists primarily of commercial and residential properties. The Site is bounded on the northwest by Post Office Road, to the northeast by a parking lot for the post office, to the southeast by a commercial building, and on the southwest by Hesperian Boulevard. A Site Plan is shown on **Figure 2**.

#### **LNAPL MONITORING**

A summary of the light non-aqueous phase liquid (LNAPL) monitoring efforts conducted at well C-2 since 2012 are included in the following paragraphs and **Table 1**. Field data sheets associated with the LNAPL monitoring are included in **Attachment A**.

On March 23, 2012, measurable LNAPL was observed in well C-2 for the first time since 1991, at a thickness of 0.30 feet. In a letter dated July 13, 2012, Alameda County Environmental Health (ACEH)

Chevron-branded Service Station 90504 October 28, 2016 Page 2 of 8

requested continuing appropriate and timely efforts to abate and recover the LNAPL from well C-2 and a LNAPL Recovery Status Report summarizing activities. The *LNAPL Recovery Status Report* was submitted on August 31, 2012, and described the LNAPL recovery efforts conducted during August 2012, which consisted of weekly monitoring of well C-2 and recovery of LNAPL, if present. A new absorbent sock was placed in the well following each recovery event. During August 2012, approximately 200 milliliters (mL) of LNAPL and approximately 5 liters (L) of total fluids (LNAPL and groundwater mixture) were recovered from well C-2. Due to the decreasing volume of LNAPL recovered from well C-2, recommendations in the report included reducing the LNAPL monitoring and recovery event frequency at well C-2 from weekly to monthly.

Stantec conducted the first monthly LNAPL monitoring event on September 14, 2012. No measurable LNAPL was observed during the event; therefore, no LNAPL was recovered, but the absorbent sock within well C-2 was replaced. During Fourth Quarter 2012, First Quarter 2013, Second Quarter 2013, and Third Quarter 2013, LNAPL monitoring and recovery events were conducted monthly at well C-2. No LNAPL was measured during any of the events conducted during Fourth Quarter 2012 and First Quarter 2013, but the absorbent sock was replaced following the November and December 2012 events, and sheen was observed during the February 2013 event. During Second Quarter 2013, no LNAPL was measured during events conducted in April and May 2013, but the absorbent sock was replaced following the April 2013 event due to discoloration. Following the May 2013 event, Stantec proceeded with removal of the absorbent sock from well C-2. During the June 2013 event, Stantec measured a LNAPL thickness of 0.01 feet; however, no LNAPL or sheen was noted by Gettler-Ryan Inc. (G-R) four days later on June 11, 2013, during the routine groundwater monitoring and sampling event. During Third Quarter 2013, no measurable LNAPL or sheen was observed during any of the monthly events, so no LNAPL recovery was conducted; however, sheen was noted by G-R during the Third Quarter 2013 groundwater monitoring and sampling event conducted on September 10, 2013.

Following Third Quarter 2013, the frequency of LNAPL monitoring events at well C-2 were reduced to quarterly starting Fourth Quarter 2013 and continuing First Quarter 2014, Second Quarter 2014, Third Quarter 2014, and Fourth Quarter 2014. No measurable LNAPL or sheen was observed during any of these quarterly events; therefore, no LNAPL recovery was conducted. In addition, G-R did not observe measurable LNAPL or sheen during the Fourth Quarter 2013, First Quarter 2014, Second Quarter 2014, Third Quarter 2014, and Fourth Quarter 2014 groundwater monitoring and sampling events. Stantec discontinued LNAPL monitoring events at well C-2 following Fourth Quarter 2014, because no LNAPL or sheen had been observed since Third Quarter 2013.

G-R reportedly observed LNAPL in well C-2 during Second Quarter 2015 at a thickness of 0.02 feet, so G-R conducted quarterly LNAPL monitoring events starting Fourth Quarter 2015 and continuing First Quarter 2016, Second Quarter 2016, and Third Quarter 2016. No measurable LNAPL or sheen was observed during any of these quarterly events. In addition, as shown in Stantec's July 31, 2015, Soil and Groundwater Investigation Report, soil samples collected near C-2 did not exhibit any characteristics of free product.

In the Second Quarter 2016 Semi-Annual Groundwater Monitoring Report, Stantec indicated that if no LNAPL is observed at the Site during Third Quarter 2016, then the LTCP groundwater-specific criteria scenario 2 will be considered satisfied and case closure will be requested. G-R performed the Third Quarter 2016 LNAPL monitoring event at well C-2 on July 13, 2016. No measurable LNAPL or sheen was observed during that event. Field data sheets for the Third Quarter 2016 LNAPL monitoring event are included in **Attachment A**.

Chevron-branded Service Station 90504 October 28, 2016 Page 3 of 8

#### LOW-THREAT CLOSURE EVALUATION

This section evaluates the Site compared to the State Water Resources Control Board (SWRCB) Low-Threat Underground Storage Tank Case Closure Policy (LTCP) criteria based on the LTCP checklist uploaded to GeoTracker™ by ACEH, dated November 20, 2015, while also considering the recent groundwater and LNAPL monitoring data.

Please refer to Stantec's Site Conceptual Model, dated April 28, 2014, Soil and Groundwater Investigation Report, dated July 31, 2015, and Second Quarter 2016 Semi-Annual Groundwater Monitoring Report, dated June 6, 2016, for historical soil and groundwater results, and associated figures.

#### General Criteria

Is the unauthorized release located within the service area of a public water system?

Yes. The Site is located within the service area of the East Bay Municipal Utility District.

Does the unauthorized release consist only of petroleum?

**Yes.** The constituents of concern (COCs) at the Site are petroleum hydrocarbons associated with gasoline, diesel, and waste oil hydrocarbons from an active service station, including total petroleum hydrocarbons as gasoline range organics (TPH-GRO), total petroleum hydrocarbons as diesel range organics (TPH-DRO), total petroleum hydrocarbons as motor oil (TPH-MO), and benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds).

• Has the unauthorized ("primary") release from the UST system been stopped?

**Yes.** As documented in the Cambria Environmental Technology, Inc. *Site Closure Request*, dated March 26, 2004, in December 1983, two 10,000-gallon and one 5,000-gallon steel USTs (first-generation) were replaced with the existing fiberglass USTs (second-generation), along with associated product lines. Approximately 120 cubic yards of impacted soil were excavated and removed from the Site at that time.

The dissolved-phase petroleum hydrocarbon plume associated with the Site is stable to decreasing in overall size and concentration, which indicates that there is no longer a petroleum hydrocarbon source propagating at the Site. Additionally, soil samples collected during the April 2015 investigation (documented in Stantec's *Soil and Groundwater Investigation Report*) did not exhibit any concentrations that would suggest an ongoing or new release.

 Has free product been removed to the maximum extent practicable (per CCR Chapter 16 Section 2655 a-c)?

**Yes.** Free product has been removed to the maximum extent practicable. LNAPL has only been observed historically in wells C-1 and C-2. Measurable LNAPL or sheen have not been observed in well C-1 since Fourth Quarter 1990, and in well C-2 since Second Quarter 2015. In addition to the details provided in the previous section, it should be noted that measurable LNAPL was reported in well C-2 during 6 of 39 monitoring events over four years between March 2012 and July 2016 (**Table 1**). The maximum thickness of LNAPL in well C-2 was reported to be 0.30 feet in March 2012. Since then, LNAPL thickness in well C-2 has declined (between

Chevron-branded Service Station 90504 October 28, 2016 Page 4 of 8

0.01 and 0.10 in the five subsequent occurrences) or has not been detected. LNAPL or sheen has not been observed in well C-2 since Second Quarter 2015, and soil samples collected during the April 2015 investigation from borings SB-4 and SB-5 (**Figure 2**), which are near well C-2 and the USTs, did not exhibit any concentrations that suggest a significant LNAPL source remains in that area.

 Has a Conceptual Site Model (CSM) that assesses the nature, extent, and mobility of the release been developed?

**Yes.** The *Site Conceptual Model* was submitted on April 28, 2014, and the results of the April 2015 investigation and recent groundwater and LNAPL monitoring further refine the CSM.

Has secondary source been removed to the extent practicable?

**Yes.** Historical remedial efforts, described in the *Site Conceptual* Model, included UST replacement and over-excavation of soil. Soil concentrations reported during the April 2015 investigation were all below method detection limits (MDLs) or environmental screening levels (ESLs), and measurable LNAPL or sheen have not been observed in well C-2 since Second Quarter 2015, which indicate that secondary source has been removed to the extent practicable. Additional secondary source removal is not warranted.

 Has soil or groundwater been tested for methyl tertiary-butyl ether (MtBE) and results reported in accordance with Health and Safety Code section 25296.15?

Yes. MtBE was analyzed in soil samples collected in association with the Site beginning in June 2001. MtBE was routinely analyzed in groundwater during monitoring and sampling events since Fourth Quarter 1995. Results have been reported to ACEH and uploaded to GeoTracker™.

• Does nuisance as defined by Water Code section 13050 exist at the site? A "nuisance" is defined as anything which meets the following (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property; (2) Affects at the same time an entire community or neighborhood; (3) Occurs during, or as a result of, the treatment or disposal of wastes.

**No.** The conditions of "nuisance" as defined by Water Code section 13050 do not exist at the Site.

 Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?

**No.** There are no unique Site attributes or Site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents.

#### Media-Specific Criteria

#### Groundwater-Specific Criteria

Current and historical groundwater quality data indicate the dissolved-phase petroleum hydrocarbon plume at the Site is stable to decreasing in overall size and concentration.

Chevron-branded Service Station 90504 October 28, 2016 Page 5 of 8

Media-specific criteria for groundwater have been categorized based on:

- 1. The length of contaminant plume;
- 2. Presence of free product;
- 3. Distance to nearest existing water supply well or surface water body; and
- 4. Concentrations of dissolved-phase benzene and MtBE.

Site conditions meet the groundwater-specific criteria under scenario #2 of the LTCP. The aspects of this scenario followed by the Site-specific information supporting its applicability are as follows:

- "The contaminant plume that exceeds water quality objectives is less than 250 feet in length."
  - o An off-Site groundwater investigation was conducted in April 2015, with the advancement of boring SB-10 in Hesperian Boulevard (**Figure 2**). A grab groundwater sample was collected, and the only analyte detected above MDLs was TPH-GRO at 57 micrograms per liter (μg/L), which is below the associated ESL of 100 μg/L. The direction of groundwater flow has historically been towards the southwest at an approximate hydraulic gradient ranging from 0.003 to 0.014 feet per foot (ft/ft). Analytical results for the grab groundwater sample collected from boring SB-10, combined with groundwater results from Second Quarter 2016, define the length of the plume to be less than 250 feet from the source area.
- "There is no free product."
  - o As described in the LNAPL Monitoring and LTCP General Criteria sections of this report, free product (LNAPL) is no longer present.
- "The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary."
  - As described in Stantec's Site Conceptual Model for this Site, no water supply wells or surface water bodies have been identified within 1,000 feet of the plume boundary. The nearest water supply well is an irrigation well located approximately 1,070 feet northeast (up-gradient) of the Site. The nearest surface water body identified is San Lorenzo Creek, which is located approximately 1,200 feet north-northwest (crossgradient) of the Site.
- "The dissolved concentration of benzene is less than 3,000 μg/L, and the dissolved concentration of MtBE is less than 1,000 μg/L."
  - As described in Stantec's Second Quarter 2016 Semi-Annual Groundwater Monitoring Report, benzene was not detected above MDLs in any Site well during Second Quarter 2016, and MtBE analysis was discontinued following the Fourth Quarter 2013 sampling event, because MtBE had not been detected above MDLs in any Site well since Third Quarter 2012.

#### THIRD QUARTER 2016 LNAPL MONITORING REPORT AND CASE CLOSURE REQUEST

Chevron-branded Service Station 90504 October 28, 2016 Page 6 of 8

# Petroleum Vapor Intrusion to Indoor Air Criteria

The Site is exempt from satisfying the petroleum vapor intrusion to indoor criteria, because the Site is an active, commercial petroleum fueling facility, and it is reasonably believed there are no unacceptable health risks resulting from exposure to indoor air.

#### Direct Contact and Outdoor Air Exposure Criteria

Current and historical soil samples, included in Stantec's Site Conceptual Model and Soil and Groundwater Investigation Report, demonstrate that Site conditions satisfy the LTCP direct contact and outdoor air exposure criteria. Concentrations of benzene, ethylbenzene, naphthalene, and polynuclear aromatic hydrocarbons (PAHs) are less than or equal to the maximum concentrations listed in Table 1 of the LTCP for specified depths at a commercial/industrial property.

#### **CONCLUSIONS AND RECOMMENDATIONS**

Based on current and historical data, the Site meets all general and media-specific criteria of the LTCP. In the Path to Closure Plan on GeoTracker, dated November 20, 2015, the only remaining impediment to closure was LNAPL verification monitoring for 9 months, which is now complete; therefore, Stantec recommends ACEH evaluate the Site for case closure. No further groundwater or LNAPL monitoring activities will be conducted at the Site while ACEH reviews and evaluates the Site for case closure.

If you have any questions, please contact the Stantec Project Manager, Travis Flora, at (408) 356-6124 or Travis.Flora@stantec.com.

#### THIRD QUARTER 2016 LNAPL MONITORING REPORT AND CASE CLOSURE REQUEST

Chevron-branded Service Station 90504 October 28, 2016 Page 7 of 8

#### LIMITATIONS

This document entitled Third Quarter 2016 LNAPL Monitoring Report and Case Closure Request was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Chevron Environmental Management Company (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by Own O'M

Erin O'Malley
Project Engineer

, -- (

Marisa Kaffenberger

Senior Engineer

Reviewed by

(signature)

Travis L. Flora

Senior Project Manager

Reviewed by

(signature)

Dorota Runyan, P.E.

Senior Engineer

# THIRD QUARTER 2016 LNAPL MONITORING REPORT AND CASE CLOSURE REQUEST

Chevron-branded Service Station 90504 October 28, 2016 Page 8 of 8

# Attachments:

Table 1 – LNAPL Monitoring Data Since 2012 – Well C-2

Figure 1 - Site Location Map

Figure 2 - Site Plan

Attachment A – LNAPL Monitoring Field Data Sheets – First Quarter 2012 through Third Quarter 2016 (included in original report but ommitted for this attachment to minimize file size)

#### CC:

Ms. Carryl MacLeod, Chevron Environmental Management Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583 - Electronic Copy

Mr. Scott Bohannon, Bohannon Organization, 60 31st Avenue, San Mateo, CA 94403 - Electronic Copy

Mr. Bob Webster, Bohannon Organization, 60 31st Avenue, San Mateo, CA 94403 - Electronic Copy



# Table 1

# LNAPL Monitoring Data Since 2012 - Well C-2

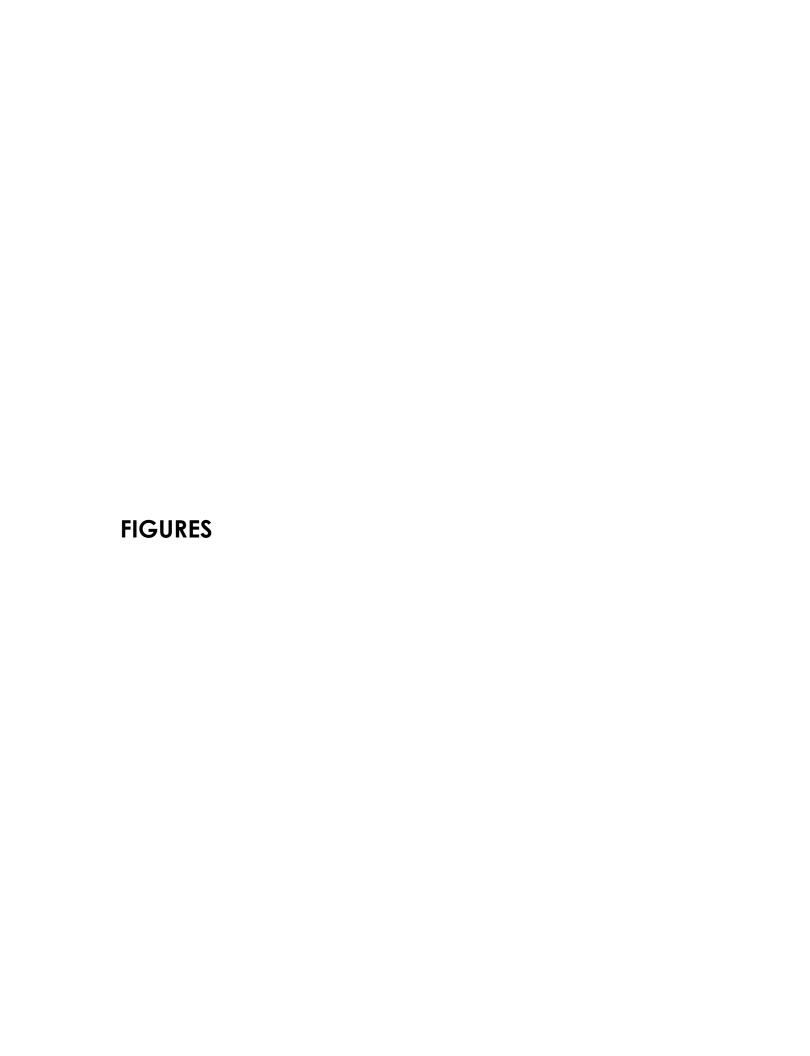
Chevron-branded Service Station 90504 15900 Hesperian Boulevard San Lorenzo, California

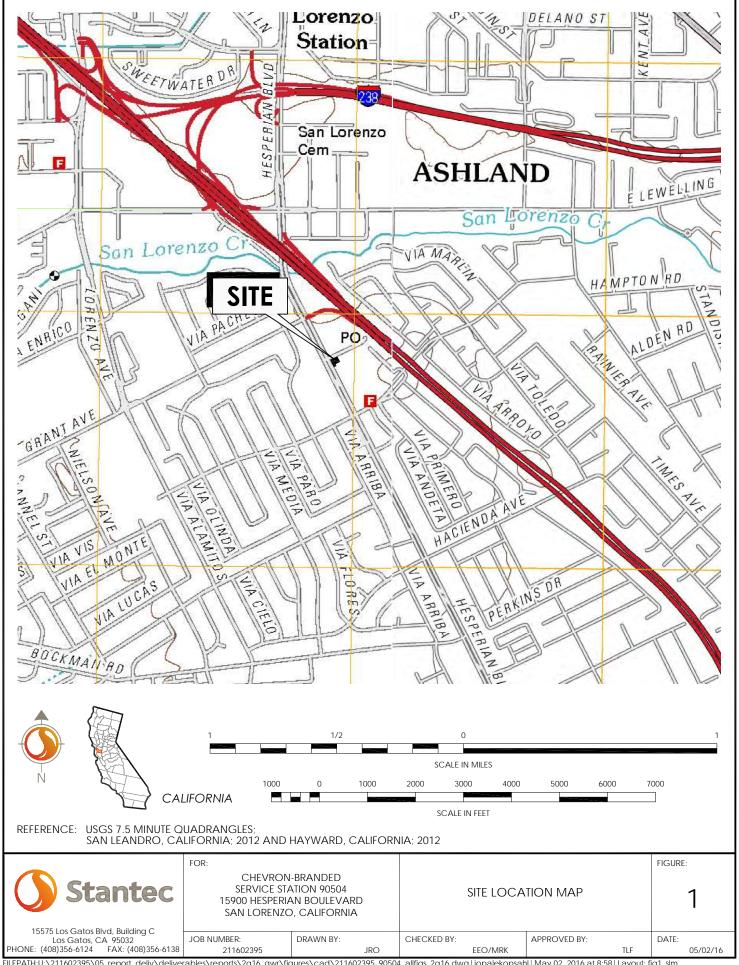
Date	LNAPL Thickness (feet)	Comments
03/23/12	0.30	
03/23/12	0.30	100 mL LNAPL and 21 mixture
08/03/12	0.10	groundwater and LNAPL removed;
		absorbent sock installed
08/10/12	0.08	100 mL LNAPL and 3 L mixture
		groundwater and LNAPL removed;
		absorbent sock replaced
08/15/12	0.00	Sheen; absorbent sock replaced
08/24/12	0.00	Absorbent sock replaced
08/30/12	0.00	Absorbent sock replaced
09/04/12	0.03	Groundwater monitoring event
09/14/12	0.00	Absorbent sock replaced
10/11/12	0.00	
11/16/12	0.00	Absorbent sock replaced
12/07/12	0.00	Groundwater monitoring event
12/20/12	0.00	Absorbent sock replaced
01/10/13	0.00	
02/08/13	0.00	Sheen
03/07/13	0.00	
03/12/13	0.00	Groundwater monitoring event
04/04/13	0.00	Absorbent sock replaced
05/01/13	0.00	Absorbent sock removed
06/07/13	0.01	
06/11/13	0.00	Groundwater monitoring event
07/12/13	0.00	
08/07/13	0.00	
09/10/13	0.00	Groundwater monitoring event; sheen
09/20/13	0.00	
10/07/13	0.00	
12/04/13	0.00	Groundwater monitoring event
01/13/14	0.00	
02/07/14	0.00	Groundwater monitoring event
04/07/14	0.00	
06/25/14	0.00	Groundwater monitoring event
07/21/14	0.00	3
08/29/14	0.00	Groundwater monitoring event
10/13/14	0.00	
12/12/14	0.00	Groundwater monitoring event
06/01/15	0.02	Groundwater monitoring event
		Combined LNAPL and groundwater
10/23/15	0.00	monitoring event
01/08/16	0.00	
04/07/16	0.00	Combined LNAPL and groundwater monitoring event
07/13/16	0.00	

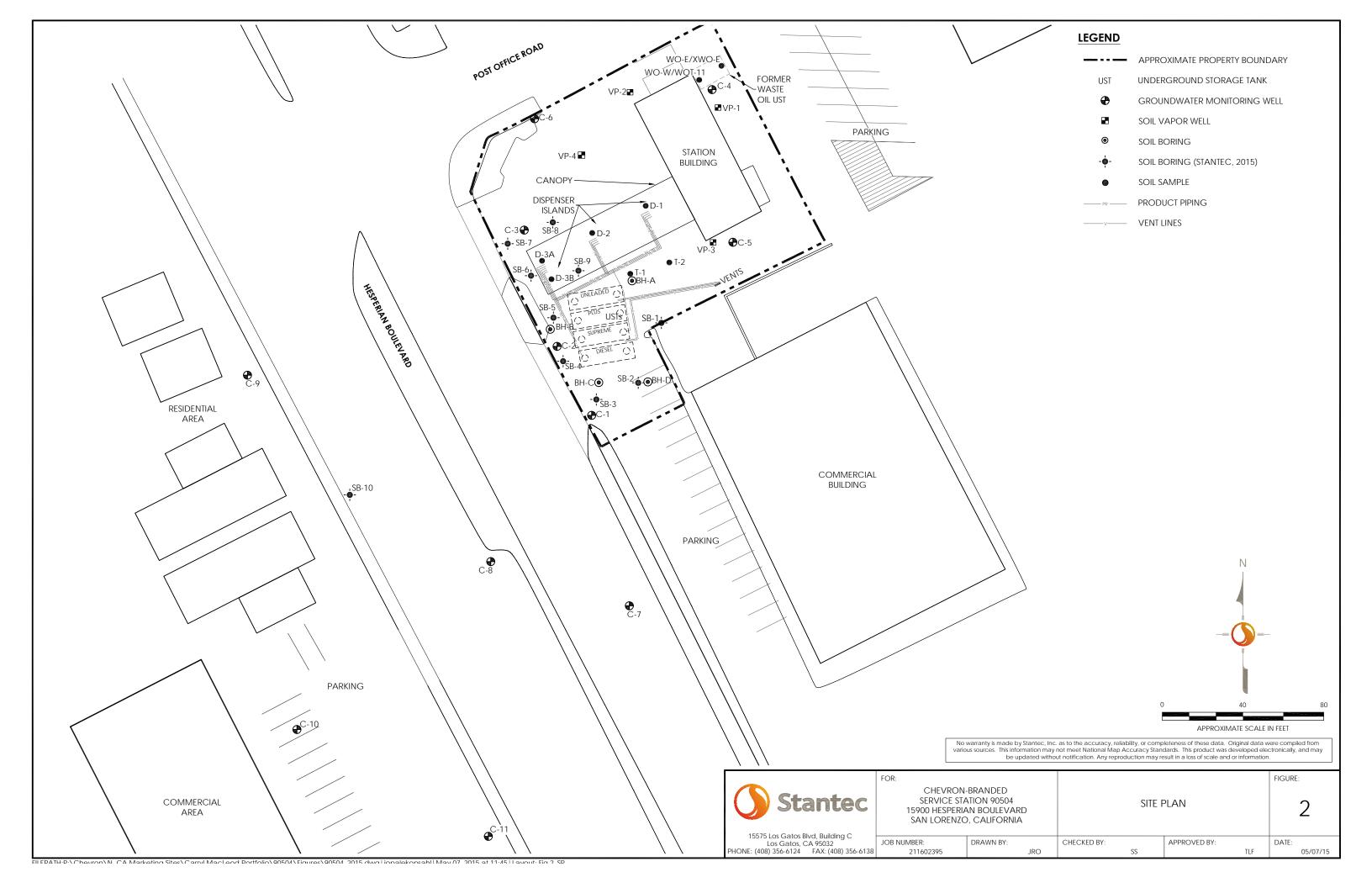
LNAPL = light non-aqueous phase liquid

mL = milliliters

L = liters







ATTACHMENT E
ACDEH Closure Request Response Letters –
December 21, 2016 and June 2, 2017

# ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY

AGENCY
REBECCA GEBHART, Interim Director



DEPARTMENT OF ENVIRONMENTAL HEALTH LOCAL OVERSIGHT PROGRAM (LOP) For Hazardous Materials Releases 1131 HARBOR BAY PARKWAY, SUITE 250 ALAMEDA, CA 94502 (510) 567-6700 FAX (510) 337-9335

December 21, 2016

Ms. Carryl MacLeod Chevron Environmental Management 6101 Bollinger Canyon Road San Ramon, CA 94583

(Sent via electronic mail to: <a href="mailto:CMacleod@chevron.com">CMacleod@chevron.com</a>)

Mr. Scott Bohannon Bohannon Organization 60 31st Avenue San Mateo, CA 94403

(Sent via electronic mail to: Scott.Bohannon@ddbo.com) Mr. Bob Webster Bohannon Organization 60 31st Avenue San Mateo, CA 94403 (Sent via electronic mail to:

Robert.Webster@ddbo.com)

Subject: Request for Closure Response; Fu

Request for Closure Response; Fuel Leak Case No. RO0000007 (Global ID # T0600100302), Chevron #9-0504, 15900 Hesperian Blvd., San Lorenzo, CA 94580

Dear Ms. MacLeod, and Messrs. Bohannon and Webster:

Alameda County Department of Environmental Health (ACDEH) staff has reviewed the case file for the above-referenced site, including the *Third Quarter 2016 LNAPL Monitoring Report and Case Closure Request*, dated October 28, 2016. The report was prepared by Stantec Consulting Services, Inc. (Stantec) of Los Gatos, California. Thank you for submitting the report. The report documented the July 2016 Light Non-Aqueous Phase Liquid (LNAPL) check at well MW-2 due to the previous presence of diesel LNAPL in the well, being closest to the existing underground storage tank (UST) complex. None was observed.

ACDEH has re-evaluated the data and recommendations presented in the above-mentioned reports, in conjunction with the case files, to determine if the site is eligible for closure as a low risk site under 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 continues to fail to meet the Media-Specific Criteria for Groundwater as discussed in more detail below.

Based on the review of the case file ACDEH requests that you address the following technical comments and send us the documents requested below.

# **TECHNICAL COMMENTS**

1. Groundwater Monitoring – ACDEH is in concurrence that LNAPL appears to be removed to the extent practicable at the site this time; however, the most recent groundwater monitoring does not support plume stability, an additional Groundwater Media-Specific characteristic. Groundwater concentrations in C-7 rose from < 50 micrograms per liter (µg/l) Total Petroleum Hydrocarbons as gasoline to 2,100 µg/l and from <50 µg/l to 270 µg/l TPH as diesel (TPHd). This is a substantial increase, for a well that has an essentially eight history of non-detectable concentrations at standard limits of reporting. ACDEH notes that well C-1 located between the two wells, remained at non-detectable concentrations for all analytes. This may indicate that a groundwater plume may have bypassed well C-1 in a preferential pathway, such as a utility corridor known to exist in proximity to well C-7. Therefore, it appears appropriate to investigate if these concentrations remain consistent or were a one-time sampling anomaly. In order to remain approximately consistent with past groundwater monitoring and sampling events, please conduct a minimum of one round groundwater monitoring in February 2017, and submit a semi-annual groundwater monitoring report, and a Request for Closure, if supported, by the date identified below.

#### SUBMITTAL ACKNOWLEDGEMENT STATEMENT

Please note that ACDEH has updated Attachment 1 with regard to report submittals to ACDEH. ACDEH will now be requiring a Submittal Acknowledgement Statement, replacing the Perjury Statement, as a

Ms. MacLeod, and Messrs. Bohannon and Webster RO0000007 December 21, 2016, Page 2

cover letter signed by the Responsible Party (RP). The language for the Submittal Acknowledgement Statement is as follows:

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's Geotracker Website.

Please make this change to your submittals to ACDEH.

#### TECHNICAL REPORT REQUEST

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

April 21, 2017 - First Quarter 2017 Semi-Annual Groundwater Monitoring Report (File to be named: 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.

Online case files are available for review at the following website: <a href="http://www.acgov.org/aceh/index.htm">http://www.acgov.org/aceh/index.htm</a>.

Thank you for your cooperation. If you have any questions, please call me at (510) 567-6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,

Digitally signed by Mark Detterman DN: cn=Mark Detterman, o=ACEH, ou=ACEH, email=mark.detterman@acgov.org, c=US Date: 2016.12.21 11:51:11 -08'00'

Mark E. Detterman, PG, CEG

Senior Hazardous Materials Specialist

Attachment 1 - Responsible Party (ies) Legal Requirements / Obligations Enclosures:

Electronic Report Upload (ftp) Instructions

Travis Flora, Stantec Consulting Services, Inc., 15575 Los Gatos Blvd, Los Gatos, CA 95032; CC: (Sent via electronic mail to: travis.flora@stantec.com)

Dilan Roe, ACDEH, (Sent via electronic mail to: dilan.roe@acgov.org) Paresh Khatri, ACDEH; (Sent via electronic mail to: paresh.khatri@acgov.org)

Mark Detterman, ACDEH, (Sent via electronic mail to: mark.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**

Alameda County Department of Environmental Health's (ACDEH) Environmental Cleanup Oversight Programs, Local Oversight Program (LOP) and Site Cleanup Program (SCP) 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 File Transfer Protocol (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 SCP 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 (http://www.waterboards.ca.gov/water issues/programs/ust/electronic submittal/) for more information on these requirements.

# ACKNOWLEDGEMENT STATEMENT

All work plans, technical reports, or technical documents submitted to ACDEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website." 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 6731, 6735, and 7835) 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 licensed 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 case meet this requirement. Additional information is available on the Board of Professional Engineers, Land Surveyors, and Geologists website at: <a href="http://www.bpelsg.ca.gov/laws/index.shtml">http://www.bpelsg.ca.gov/laws/index.shtml</a>.

#### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, late 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 SCP)

REVISION DATE: December 1, 2016

ISSUE DATE: July 5, 2005

PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010,

July 25, 2010; May 15, 2014, November 29, 2016

SUBJECT: Electronic Report Upload (ftp) Instructions

**SECTION:** Miscellaneous Administrative Topics & Procedures

The Alameda County Environmental Cleanup Oversight Programs (LOP and SCP) 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.
- <u>Do not</u> 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. <u>Documents</u>
  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) Open File Explorer using the Windows key + E keyboard shortcut.
    - i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
  - b) On the address bar, type in ftp://alcoftp1.acgov.org.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive)
  - d) Click Log On.
  - e) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - f) 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.

# ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH LOCAL OVERSIGHT PROGRAM (LOP) For Hazardous Materials Releases 1131 HARBOR BAY PARKWAY, SUITE 250 ALAMEDA, CA 94502 (510) 567-6700 FAX (510) 337-9335

REBECCA GEBHART, Interim Director

June 2, 2017

Ms. Carryl MacLeod Chevron Environmental Management 6101 Bollinger Canyon Road San Ramon, CA 94583 (Sent via electronic mail to: CMacleod@chevron.com) Mr. Scott Bohannon Bohannon Organization 60 31st Avenue San Mateo, CA 94403 (Sent via electronic mail to: Scott.Bohannon@ddbo.com)

Mr. Bob Webster Bohannon Organization 60 31st Avenue San Mateo, CA 94403 (Sent via electronic mail to: Robert.Webster@ddbo.com)

Subject:

Request for Closure Response; Fuel Leak Case No. RO0000007 (Global ID # T0600100302), Chevron #9-0504, 15900 Hesperian Blvd., San Lorenzo, CA 94580

Dear Ms. MacLeod, and Messrs. Bohannon and Webster:

Alameda County Department of Environmental Health (ACDEH) staff has reviewed the case file for the above-referenced site, including the *First Quarter 2017 LNAPL Monitoring Report and Request for Case Closure*, dated April 13, 2017. The report was prepared by Stantec Consulting Services, Inc. (Stantec). Thank you for submitting the report.

The report documented the February 2017 groundwater sampling event at the site, and stated that no free-phased product was again observed at the site, and that the dissolved-phase hydrocarbon plume is stable to decreasing in overall size and concentration. The report requested the site be evaluated again for closure under the Low Threat Closure Policy (LTCP).

ACDEH has re-evaluated the data and recommendations presented in the above-mentioned reports, in conjunction with the case files, to determine if the site is eligible for closure as a low risk site under 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 continues to fail to meet the Media-Specific Criteria for Groundwater as discussed in more detail below.

Based on the review of the case file ACDEH requests that you address the following technical comments and send us the documents requested below.

# **TECHNICAL COMMENTS**

1. Groundwater Monitoring - As before, ACDEH is in concurrence that LNAPL appears to be removed to the extent practicable at the site at this time; however, the most recent groundwater monitoring does not support plume stability based on the analytical data. Between October 2015 and February 2017 groundwater concentrations in C-7 rose from < 50 micrograms per liter (µg/l) Total Petroleum Hydrocarbons as gasoline (TPHg) to 2,100 µg/l TPHg in April 2016, to 3,200 µg/l TPHg in February 2017. During this same period, concentrations of TPH as diesel (TPHd) rose from <50 µg/l in October 2015, to 270 µg/l in April 2016, and to 600 µg/l TPHd in February 2017. Similarly, ethylbenzene increased from <0.5 µg/l, to 8 µg/l, to 41 µg/l during the same time interval. As before, these are substantial increases, for a well that has an approximately seven year history (March 2009 to April 2016) of non-detectable concentrations at standard limits of reporting. ACDEH notes that well C-1 located between the two wells, remained at non-detectable concentrations for all analytes. This may indicate that a groundwater plume may have by-passed well C-1 in a preferential pathway, such as a utility corridor known to exist in proximity to well C-7. Therefore, it remains appropriate to investigate if these concentrations remain consistent or are a temporary anomaly. In order to remain approximately consistent with past groundwater monitoring and sampling events, please conduct a minimum of one round of groundwater monitoring in October 2017, and submit a semi-annual groundwater monitoring report, and if supported, a Request for Closure, by the date identified below.

Ms. MacLeod, and Messrs. Bohannon and Webster RO0000007 June 2, 2017, Page 2

2. Site Conceptual Model - It appears additionally appropriate to update the focused Site Conceptual Model (SCM) in order to understand the implication of a groundwater gradient to the southwest, and continued increasing groundwater concentrations to the southeast of the site. The concentrations do not appear to be related to changing groundwater elevations based on recent historic data (March 2009, March 2010, March 2012, December 2012, and December 2014).

In order to expedite review, ACDEH requests the focused SCM be presented in a tabular format that highlights the major SCM elements and associated data gaps, which need to be addressed to progress the site to case closure under the LTCP. Please see Attachment A "Site Conceptual Model Requisite Elements".

Should data gaps be identified in the focused SCM, please include a work plan to fill the lack of understanding in the SCM of the identified data gaps.

# SUBMITTAL ACKNOWLEDGEMENT STATEMENT

Please note that ACDEH has updated Attachment 1 with regard to report submittals to ACDEH. ACDEH will now be requiring a Submittal Acknowledgement Statement, replacing the Perjury Statement, as a cover letter signed by the Responsible Party (RP). The language for the Submittal Acknowledgement Statement is as follows:

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's Geotracker Website.

Please make this change to your submittals to ACDEH.

#### TECHNICAL REPORT REQUEST

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

- December 18, 2017 Third Quarter 2017 Semi-Annual Groundwater Monitoring Report (File to be named: GWM_R_yyyy-mm-dd)
- December 18, 2017 Site Conceptual Model and Data Gap Work Plan (As Necessary)
   (File to be named: WP_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.

Online case files are available for review at the following website: <a href="http://www.acgov.org/aceh/index.htm">http://www.acgov.org/aceh/index.htm</a>.

Thank you for your cooperation. If you have any questions, please call me at (510) 567-6876 or send me an electronic mail message at <a href="mark.detterman@acgov.org">mark.detterman@acgov.org</a>.

Sincerely,

Mark E. Detterman, PG, CEG

Senior Hazardous Materials Specialist

Ms. MacLeod, and Messrs. Bohannon and Webster RO0000007 June 2, 2017, Page 3

Enclosures:

Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations

Electronic Report Upload (ftp) Instructions

Attachment A - Site Conceptual Model Requisite Elements

cc: Travis Flora, Stantec Consulting Services, Inc., 15575 Los Gatos Blvd, Los Gatos, CA 95032; (Sent via electronic mail to: <a href="mailto:travis.flora@stantec.com">travis.flora@stantec.com</a>)

Dilan Roe, ACDEH, (Sent via electronic mail to: <a href="mailto:dilan.roe@acgov.org">dilan.roe@acgov.org</a>)

Paresh Khatri, ACDEH; (Sent via electronic mail to: <a href="mailto:paresh.khatri@acgov.org">paresh.khatri@acgov.org</a>)

Mark Detterman, ACDEH, (Sent via electronic mail to: <a href="mailto:mark.detterman@acgov.org">mark.detterman@acgov.org</a>)

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**

Alameda County Department of Environmental Health's (ACDEH) Environmental Cleanup Oversight Programs, Local Oversight Program (LOP) and Site Cleanup Program (SCP) 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 File Transfer Protocol (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 SCP 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 (http://www.waterboards.ca.gov/water issues/programs/ust/electronic submittal/) for more information on these requirements.

#### ACKNOWLEDGEMENT STATEMENT

All work plans, technical reports, or technical documents submitted to ACDEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website." 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 6731, 6735, and 7835) 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 licensed 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 case meet this requirement. Additional information is available on the Board of Professional Engineers, Land Surveyors, and Geologists website at: <a href="http://www.bpelsg.ca.gov/laws/index.shtml">http://www.bpelsg.ca.gov/laws/index.shtml</a>.

### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, late 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 SCP)

REVISION DATE: December 1, 2016

ISSUE DATE: July 5, 2005

PREVIOUS REVISIONS: October 31, 2005;

December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010; May 15, 2014, November 29, 2016

SECTION: Miscellaneous Administrative Topics & Procedures

SUBJECT: Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SCP) 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.
    - Send an e-mail to deh.loptoxic@acgov.org.
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- 2) Upload Files to the ftp Site
  - a) Open File Explorer using the Windows key + Ekeyboard shortcut.
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  - c) Enter your User Name and Password. (Note: Both are Case Sensitive)
  - d) Click Log On.
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  - f) 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 <a href="mailto:deh.loptoxic@acgov.org">deh.loptoxic@acgov.org</a> 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 A

**Site Conceptual Model Requisite Elements** 

#### ATTACHMENT A

# Site Conceptual Model

The site conceptual model (SCM) is an essential decision-making and communication tool for all interested parties during the site characterization, remediation planning and implementation, and closure process. A SCM is a set of working hypotheses pertaining to all aspects of the contaminant release, including site geology, hydrogeology, release history, residual and dissolved contamination, attenuation mechanisms, pathways to nearby receptors, and likely magnitude of potential impacts to receptors.

The SCM is initially used to characterize the site and identify data gaps. As the investigation proceeds and the data gaps are filled, the working hypotheses are modified, and the overall SCM is refined and strengthened until it is said to be "validated". At this point, the focus of the SCM shifts from site characterization towards remedial technology evaluation and selection, and later remedy optimization, and forms the foundation for developing the most cost-effective corrective action plan to protect existing and potential receptors.

For ease of review, Alameda County Environmental Health (ACEH) requests utilization of tabular formats to (1) highlight the major SCM elements and their associated data gaps which need to be addressed to progress the site to case closure (see Table 1 of attached example), and (2) highlight the identified data gaps and proposed investigation activities (see Table 2 of the attached example). ACEH requests that the tables presenting the SCM elements, data gaps, and proposed investigation activities be updated as appropriate at each stage of the project and submitted with work plans, feasibility studies, corrective action plans, and requests for closures to support proposed work, conclusions, and/or recommendations.

The SCM should incorporate, but is not limited to, the topics listed below. Please support the SCM with the use of large-scaled maps and graphics, tables, and conceptual diagrams to illustrate key points. Please include an extended site map(s) utilizing an aerial photographic base map with sufficient resolution to show the facility, delineation of streets and property boundaries within the adjacent neighborhood, downgradient irrigation wells, and proposed locations of transects, monitoring wells, and soil vapor probes.

- a. Regional and local (on-site and off-site) geology and hydrogeology. Include a discussion of the surface geology (e.g., soil types, soil parameters, outcrops, faulting), subsurface geology (e.g., stratigraphy, continuity, and connectivity), and hydrogeology (e.g., water-bearing zones, hydrologic parameters, impermeable strata). Please include a structural contour map (top of unit) and isopach map for the aquitard that is presumed to separate your release from the deeper aquifer(s), cross sections, soil boring and monitoring well logs and locations, and copies of regional geologic maps.
- b. Analysis of the hydraulic flow system in the vicinity of the site. Include rose diagrams for depicting groundwater gradients. The rose diagram shall be plotted on groundwater elevation contour maps and updated in all future reports submitted for your site. Please address changes due to seasonal precipitation and groundwater pumping, and evaluate the potential interconnection between shallow and deep aquifers. Please include an analysis of vertical hydraulic gradients, and effects of pumping rates on hydraulic head from nearby water supply wells, if appropriate. Include hydraulic head in the different water bearing zones and hydrographs of all monitoring wells.
- c. Release history, including potential source(s) of releases, potential contaminants of concern (COC) associated with each potential release, confirmed source locations, confirmed release locations, and existing delineation of release areas. Address primary leak source(s) (e.g., a tank, sump, pipeline, etc.) and secondary sources (e.g., high-

#### ATTACHMENT A

# **Site Conceptual Model (continued)**

concentration contaminants in low-permeability lithologic soil units that sustain groundwater or vapor plumes). Include local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.).

- d. Plume (soil gas and groundwater) development and dynamics including aging of source(s), phase distribution (NAPL, dissolved, vapor, residual), diving plumes, attenuation mechanisms, migration routes, preferential pathways (geologic and anthropogenic), magnitude of chemicals of concern and spatial and temporal changes in concentrations, and contaminant fate and transport. Please include three-dimensional plume maps for groundwater and two-dimensional soil vapor plume plan view maps to provide an accurate depiction of the contaminant distribution of each COC.
- e. Summary tables of chemical concentrations in different media (i.e., soil, groundwater, and soil vapor). Please include applicable environmental screening levels on all tables. Include graphs of contaminant concentrations versus time.
- f. Current and historic facility structures (e.g., buildings, drain systems, sewer systems, underground utilities, etc.) and physical features including topographical features (e.g., hills, gradients, surface vegetation, or pavement) and surface water features (e.g. routes of drainage ditches, links to water bodies). Please include current and historic site maps.
- g. Current and historic site operations/processes (e.g., parts cleaning, chemical storage areas, manufacturing, etc.).
- h. Other contaminant release sites in the vicinity of the site. Hydrogeologic and contaminant data from those sites may prove helpful in testing certain hypotheses for the SCM. Include a summary of work and technical findings from nearby release sites, including the two adjacent closed LUFT sites, (i.e., Montgomery Ward site and the Quest Laboratory site).
- i. Land uses and exposure scenarios on the facility and adjacent properties. Include beneficial resources (e.g., groundwater classification, wetlands, natural resources, etc.), resource use locations (e.g., water supply wells, surface water intakes), subpopulation types and locations (e.g., schools, hospitals, day care centers, etc.), exposure scenarios (e.g. residential, industrial, recreational, farming), and exposure pathways, and potential threat to sensitive receptors. Include an analysis of the contaminant volatilization from the subsurface to indoor/outdoor air exposure route (i.e., vapor pathway). Please include copies of Sanborn maps and aerial photographs, as appropriate.
- Identification and listing of specific data gaps that require further investigation during subsequent phases of work. Proposed activities to investigate and fill data gaps identified.