

REPORT

Second Quarter 2016
Remediation Progress Report
SFPP Norwalk Pump Station
Norwalk, California

Prepared for

Kinder Morgan Energy Partners, L.P.

July 15, 2016



CH2M HILL Engineers, Inc.
6 Hutton Centre Drive
Suite 700
Santa Ana, California 92707

Signature Page

The material and data presented in this report were prepared consistent with current and generally accepted consulting principles and practices. This work was supervised by the following CH2M licensed professional.



William Breedlove
CH2M HILL California Professional Chemical Engineer,
No. 5142

July 15, 2016

Date

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Acronyms and Abbreviations

µg/L	micrograms per liter
1,2-DCA	1,2-dichloroethane
Air Tech	Air Technology Laboratories
Asset	Asset Laboratories (formerly Advanced Technology Laboratories)
ASTM	ASTM International
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CH2M	CH2M HILL Engineers, Inc.
EPA	U.S. Environmental Protection Agency
GWE	groundwater extraction
GWTS	groundwater treatment system
LGAC	liquid-phase granular activated carbon
MTBE	methyl tertiary butyl ether
NPDES	National Pollutant Discharge Elimination System
O&M	operations and maintenance
OWS	oil-water separator
PID	photoionization detector
RAB	Restoration Advisory Board
RWQCB	California Regional Water Quality Control Board, Los Angeles Region
SCAQMD	South Coast Air Quality Management District
scfm	standard cubic feet per minute
SF6	sulfur hexafluoride
SFPP	SFPP, L.P., an operating partnership of Kinder Morgan Energy Partners, L.P.
SVE	soil vapor extraction
TBA	tertiary butyl alcohol
TFE	total fluids extraction
TPH	total petroleum hydrocarbons
TPH-d	total petroleum hydrocarbons quantified as diesel
TPH-g	total petroleum hydrocarbons quantified as gasoline
TPH-o	total petroleum hydrocarbons quantified as oil
TPH-total	total petroleum hydrocarbons quantified as gasoline, diesel, and oil
VOC	volatile organic compound
WSB	West Side Barrier

Introduction

CH2M HILL Engineers, Inc. (CH2M) has prepared this report on behalf of SFPP, L.P. (SFPP), an operating partnership of Kinder Morgan Energy Partners, L.P., to summarize remediation activities performed at the former SFPP Norwalk Pump Station located within the Defense Fuel Support Point Norwalk, located at 15306 Norwalk Boulevard, Norwalk, California (the site; Figure 1) during the second quarter 2016 reporting period.

This progress report is submitted pursuant to a request from the California Regional Water Quality Control Board, Los Angeles Region (RWQCB) in its letter dated October 25, 2006 (RWQCB, 2006). Additional site background information can be found in the report titled, *Conceptual Site Model and Proposed Alternate Interim Remedy for Soil, Groundwater, and LNAPL* (CH2M, 2013a), and in previously submitted semiannual groundwater monitoring reports.

This report summarizes the remediation systems present at the site and describes remediation activities for the period of April through June 2016 with documentation of the following tasks:

- Operations and maintenance (O&M) of remediation systems performed by SFPP field personnel
- Remediation system evaluation

The remediation activities performed during April through June 2016 and the progress achieved through those activities are summarized in the following sections.

Remediation Systems

SFPP currently operates remediation systems consisting of soil vapor extraction (SVE), total fluids extraction (TFE) of free product and/or groundwater using top-loading pumps, and treatment of extracted soil vapors and groundwater to address two specific areas at and near the site: the south-central area and the southeastern area. Operation of the West Side Barrier (WSB) groundwater extraction (GWE) system (WSB system) for remediation of the western offsite area was discontinued in August 2008. SFPP also operates a horizontal biosparge system to enhance mass removal of free-phase and dissolved-phase hydrocarbon constituents in the south-central area of the site. Further discussion of this system is provided below.

Remediation in the south-central and southeastern areas consists of SVE and TFE. At several well locations, SVE is coupled with TFE in a process referred to as dual-phase extraction. SVE is performed using a blower to remove soil vapors from the south-central and southeastern areas. The extracted vapors are conveyed to a knock-out tank that separates entrained moisture from the soil vapors. Accumulated moisture in the knock-out tank is treated by the main groundwater treatment system (GWTS) described below. The soil vapors are then treated in a thermal oxidizer where volatile organic compounds (VOCs) are converted to carbon dioxide and water prior to being discharged to the atmosphere. Operation of the GWTS and SVE system is conducted in accordance with Permits to Construct (Application Nos. 569588 and 567723, respectively; ID 110835) issued by the South Coast Air Quality Management District (SCAQMD).

The main GWTS processes free product and groundwater recovered from the south-central and southeastern parts of the site. Free product and groundwater recovered by pneumatically operated top-loading total fluids pumps are piped to an oil-water separator (OWS). Free product from the OWS is collected in a storage tank and recycled at an offsite location. Water from the OWS is treated using liquid-phase granular activated carbon (LGAC). Treated water is routed through an onsite 3,000-gallon equalization tank. Two fluidized bed bioreactors installed downstream of the equalization tank treat fuel oxygenates such as tertiary butyl alcohol (TBA) and methyl tertiary butyl ether (MTBE) that are not treated in the LGAC. The treated groundwater then passes through polishing LGAC units prior to discharge in accordance with a National Pollutant Discharge Elimination System (NPDES) permit (NPDES No. CA0063509, CI No. 7497).

SFPP recently completed installation of a horizontal biosparge system in the south-central area of the site. Construction of the biosparge well is documented in the report titled, *Horizontal Biosparge Well and Soil Vapor Monitoring Probe Completion Report* (CH2M, 2015). The biosparge system injects ambient air into the horizontal biosparge well, BS-01, via a rotary screw air compressor, at a maximum design rate of approximately 500 standard cubic feet per minute (scfm). SFPP's SVE system has an interlock that ensures the biosparge system cannot operate unless the SVE system is operating. Operation of the SVE system reduces the potential for off-gassing of VOCs during biosparge operations. Pilot testing commenced on January 6, 2016, and is anticipated to continue for approximately 1 year in order to evaluate the feasibility of system expansion. Soil vapor and groundwater data collected as part of the pilot testing will be submitted to the RWQCB and Restoration Advisory Board (RAB) under separate cover. A summary of remediation wells in the south-central, southeastern, and WSB areas is presented in Table 1. Table 1 includes well identifications, well construction details, well use, and operational status at the end of the second quarter 2016. The remediation system layout is presented in Figure 2.

Operations and Maintenance

During the second quarter 2016 reporting period, O&M of the remediation systems included the following tasks:

- Performed weekly maintenance and monitoring of the south-central and southeastern SVE and TFE wells, the SVE system and GWTS (collectively referred to as remediation systems), and the horizontal biosparge system.
- Performed cleanout of the OWS, sump, equalization tank, and transfer tank.
- Performed carbon changeout of the LGAC vessels.
- Performed carbon changeout of the vapor-phase granular activated carbon vessels used to treat off-gas from the product tank and OWS.
- Began installation of new OWS piping and concrete containment pad.

The remediation systems operated during the second quarter 2016 with the following exceptions:

- The GWTS, SVE, and biosparging systems were turned off on April 6, 2016, to facilitate gauging and sampling activities for the first semiannual groundwater sampling event. The systems were restarted on April 14, 2016.
- The SVE shut down due to a low air pressure alarm on April 24, 2016. The alarm was reset and the system was restarted on April 25, 2016.
- The GWTS, SVE, and biosparging systems were shut down due to a power outage on April 25, 2016. The systems were restarted later that day. The GWTS, SVE, and biosparging systems were turned off on June 24, 2016, for the biosparge pilot test groundwater sampling. The systems were restarted on July 1, 2016.

During this reporting period, remediation system inspections were performed on a weekly basis. For these inspections, volumes of extracted groundwater, hours of operation, and other system parameters were recorded during system operation.

Overall, during the second quarter 2016, the SVE system was operational 82 percent of the time (97 percent of the time excluding planned shutdowns), and the GWTS operated 78 percent of the time (94 percent of the time excluding planned shutdowns). The biosparge system operated 82 percent of the time (97 percent of the time excluding planned shutdowns). Table 2 presents the SVE system operations summary. Extracted vapor photoionization detector (PID) measurements at the end of the second quarter 2016 are summarized in Table 3. Extracted vapor analytical results for the second quarter 2016 are summarized in Table 4. The groundwater remediation system operation activities for the second quarter 2016 are summarized in Table 5. The extracted groundwater analytical results for the second quarter 2016 are summarized in Table 6. Table 7 presents the biosparge system operations summary. Historical (post-2007) gauging results of select TFE and SVE wells are provided in Table 8. Pre-2007 data can be found in previous semiannual groundwater monitoring reports.

Vapor samples from the SVE system influent and water samples from the GWTS influent were collected during the second quarter 2016 when the systems were in operation. During the second quarter 2016, influent vapor samples were collected on April 5, May 13, and June 7, 2016. Influent water samples were collected on April 5, May 3, and June 14, 2016, when the GWTS was operating. The water samples were delivered to Asset Laboratories (Asset; formerly Advanced Technology Laboratories) of Las Vegas, Nevada, for analysis. Asset is certified by the California Department of Public Health Environmental

Laboratory Accreditation Program. The vapor samples were delivered to Air Technology Laboratories (Air Tech) of City of Industry, California, for analysis.

Air Tech analyzed the vapor samples for the following:

- Fixed gases (methane, carbon dioxide, oxygen, and argon) using ASTM International (ASTM) D1946
- VOCs using U.S. Environmental Protection Agency (EPA) Method TO-15
- Total VOCs using EPA Method TO-3

Asset analyzed the water samples for the following:

- Total petroleum hydrocarbons (TPH) quantified as gasoline (TPH-g), TPH quantified as diesel (TPH-d), and TPH quantified as oil (TPH-o) (collectively referred to as TPH-total) using EPA Method 8015(M)
- VOCs using EPA Method 8260B

The laboratory analytical reports and chain-of-custody documents for these samples are included in Appendix A.

Summary of Remediation Progress

Based on weekly monitoring of the influent vapor concentration, vapor extraction flow rate, and hours of operation, the total mass of VOCs removed by SVE was 47,416 pounds during the second quarter 2016. A significant increase in mass removal was observed during the first quarter 2016 due to higher influent concentrations resulting from operation of the horizontal biosparge system. During the second quarter 2016, influent concentrations declined to less than 2,000 parts per million by volume (ppmv), resulting in mass removal quantities similar to those reported in the second half of 2015. Since SVE implementation in September 1995, the cumulative mass of VOCs removed was 3,442,026 pounds (Table 2). The cumulative mass removed by SVE does not include the mass removed by naturally occurring in situ biodegradation.

A total of 856,633 gallons of groundwater was extracted during the second quarter 2016 (Table 5). No water was extracted from the WSB area during the second quarter 2016. Approximately 97.4 million gallons of groundwater has been extracted from the south-central, southeastern, and WSB areas since GWTS operations first began in 1996.

GWE was discontinued in the WSB region during the third quarter 2008 based on the reduced lateral extent and low concentrations of MTBE and 1,2-dichloroethane (1,2-DCA) west of the site. 1,2-DCA, MTBE, and TBA concentrations in the western area during the second quarter 2016 did not warrant restarting the WSB system.

The amount of free product that accumulated in the product holding tank of the GWTS was estimated to be 22 gallons during the second quarter 2016. Since 1995, a total of 14,042 gallons of product has been removed by TFE, vacuum truck, or manual bailing operations. The estimated mass removal (pounds) of hydrocarbons by the GWTS is shown in Table 5. Mass removal estimates between 1996 and 2005 are based on benzene, toluene, ethylbenzene, and total xylene (BTEX) and MTBE concentrations in the groundwater influent (TPH data were not available) and total volume of extracted groundwater. Mass removal estimates between 2006 and 2011 are based on groundwater influent concentrations of TPH-g and TPH quantified as fuel product, and the total volume of extracted groundwater. Mass removal estimates between 2012 and 2016 are based on groundwater influent TPH-total concentrations (TPH-total includes TPH-g, TPH-d, and TPH-o) and the total volume of extracted groundwater. Since GWE first began in 1996, hydrocarbon mass removed by the GWTS is estimated to be 19,357 pounds. During the second quarter 2016, the mass removal of hydrocarbons was estimated to be 253 pounds. This represents a significant decrease in mass removal since the first quarter 2016, when the mass removed was 4,203 pounds. The decrease is due to lower influent concentrations resulting from operation of the horizontal biosparge system. The maximum TPH-total concentration in the second quarter 2016 was 64,100 micrograms per liter ($\mu\text{g/L}$), compared to 2,685,000 $\mu\text{g/L}$ during the first quarter 2016 (Table 6).

The biosparge system operated for 1,458 hours in the second quarter 2016 (Table 7). During April and May 2016, the biosparge system flow (air injection) rate was maintained at approximately 240 scfm. Injection rates were subsequently increased during the latter part of May 2016 and maintained at approximately 420 scfm during June 2016.

System Evaluation and Optimization

The TFE system is currently offline, as of June 24, 2016, for installation of a new OWS and associated pad to allow more efficient removal of free product from the influent stream.

The first semiannual 2016 groundwater monitoring event in the WSB region occurred during the second quarter 2016. Monitoring results support the continued shutdown of GWE in the WSB region. 1,2-DCA, MTBE, and TBA concentrations in the western area will continue to be monitored during routine semiannual groundwater monitoring events; the WSB system will be restarted if necessary.

As shown in Table 8, measurable free product was observed in seven remediation wells during the first semiannual groundwater monitoring event (conducted during the second quarter of 2016). Of these, one well (GMW-36) in the southeastern area had measureable product; the remaining six wells (GMW-10, GMW-22, GMWO-11, GMW-O-12, GMW-O-21, and MW-O-2) with measurable product are located in the south-central area. Up to 6.49 feet of measurable product was observed in offsite well GMW-O-12 on April 11, 2016. It is believed that increased product thicknesses, previously observed, are indicative of declining water levels across the site (Figure 3). However, during recent groundwater monitoring conducted in June 2016 (for pilot test data collection), measurable free product was observed in only three remediation wells in the south-central area. The product thicknesses ranged from 0.06 foot in MW-SF-12 to 0.8 foot in GMW-O-12. As noted above, approximately 6.5 feet of measurable product had been observed in GMW-O-12 during April 2016. The substantial decline in measurable product in the south-central area is directly attributed to biosparge system operations. Biosparge system operations will continue during the third quarter 2016. Air injection rates will be optimized to ensure adequate destruction efficiency of extracted vapors by the SVE system.

Planned Third Quarter 2016 Activities

During the third quarter 2016, SFPP plans to continue to focus remedial efforts on the south-central and southeastern areas. The following maintenance and other activities are planned to be completed during the third quarter 2016:

- Complete installation of the new OWS and associated pad to allow more efficient removal of free product from the influent stream.
- Continue weekly maintenance and monitoring of the south-central and southeastern SVE and TFE/GWE treatment systems, and horizontal biosparge system.
- Measure individual well vapor concentrations.
- Collect and analyze system influent vapor and groundwater samples.
- Perform as-needed carbon changeouts of the LGAC vessels.
- Remove, inspect, and repair existing TFE/GWE pumps and associated discharge lines.
- Install pumps and associated equipment necessary for TFE at select wells with measurable free product.
- Continue to remove free product from wells without TFE pumps using manual bailing methods.
- Deliver new regenerative thermal oxidizer vapor extraction and treatment system, and complete design for installation.
- Continue biosparge pilot testing, as outlined in the *Horizontal Biosparge System Construction and Pilot Test Work Plan* submitted to the RWQCB on November 18, 2013 (CH2M, 2013b). Soil vapor and groundwater data collected as part of the pilot testing will be submitted to the RWQCB and RAB under separate cover.

The TFE, GWE, and SVE systems for the south-central and southeastern areas will continue to operate. Operation of the TFE system in the southeastern area will be monitored closely, and adjustments will be made to improve fluid recovery. System inspections will continue on a weekly basis; system evaluation parameters will be collected as needed. The remediation activities and progress for the third quarter 2016 will be described in the Third Quarter 2016 Remediation Progress Report, to be submitted by October 15, 2016.

Pilot testing of the horizontal biosparge system in the south-central area will continue in the third quarter 2016. Testing will be performed for a period of approximately 1 year in order to evaluate the feasibility of system expansion. Progress reports on the pilot testing activities will be submitted to the RWQCB under separate cover until completion of the pilot test, as requested in the RWQCB's work plan approval letter (RWQCB, 2014).

References

California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 2006. Letter to Mr. Kola Olowu, Defense Energy Support Center, Los Angeles, and Mr. Michael Pitta, Kinder Morgan Energy Partners; Conditional Approval of Revised Remedial Action Plan and Second Addendum to Remedial Action Plan for the Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk (SLIC No. 0286A, DOD No. 16638). October 25.

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Tables

Table 1. Remediation Well Construction and Status

SFPP Norwalk Pump Station, Norwalk, California

Remediation Area	Remediation Well ID	Installation Date	Top of Well Casing Elevation (feet msl)	Well Screen Interval (feet bgs)	Remediation Well Function	Well Operation Status at End of Second Quarter 2016	
						SVE/BS	TFE/GWE
South-Central	MW-SF-1	6/18/1990	78.93	25 - 40	SVE	ON	--
	MW-SF-2	6/18/1990	78.53	25 - 40	SVE; TFE	ON	OFF
	MW-SF-3	6/18/1990	78.12	25 - 40	SVE; TFE	ON	OFF
	MW-SF-4	6/19/1990	79.38	25 - 40	SVE	ON	--
	MW-SF-5	9/19/1990	79.74	23 - 38	SVE	ON	--
	MW-SF-6	9/19/1990	76.80	25 - 40	SVE; TFE	ON	OFF
	MW-SF-9	6/15/1995	74.10	--	SVE	ON	--
	MW-SF-10	9/23/2003	76.53	10 - 30	SVE	ON	--
	MW-SF-11	6/19/2007	78.56	20 - 40	SVE; TFE	ON	OFF
	MW-SF-12	6/18/2007	78.07	20 - 40	SVE; TFE	ON	OFF
	MW-SF-13	6/19/2007	73.40	20 - 40	SVE; TFE	ON	OFF
	MW-SF-14	6/21/2007	78.16	20 - 40	SVE; TFE	OFF	OFF
	MW-SF-15	6/21/2007	78.27	20 - 40	SVE; TFE	ON	OFF
	MW-SF-16	6/20/2007	78.21	20 - 40	SVE; TFE	ON	OFF
	MW-SF-17	--	--	--	SVE	ON	--
	GMW-9	7/8/1991	77.16	20 - 50	SVE; TFE	OFF	OFF
	GMW-10	7/8/1991	N/A	25 - 50	SVE; TFE	ON	OFF
	GMW-22	8/2/1991	77.24	25 - 60	SVE; TFE	ON	OFF
	GMW-24	8/5/1991	77.48	25 - 60	SVE; TFE	ON	OFF
	GMW-25	1/10/1992	78.14	20 - 50	SVE; TFE	ON	OFF
	GWR-3	1/10/1992	77.60	20 - 50	SVE; TFE	ON	OFF
	VEW-1	09/19/90	--	5 - 25	SVE	ON	--
	VEW-2	09/19/90	--	5 - 25	SVE	ON	--
	MW-O-1	1/22/1991	75.48	25 - 40	SVE; TFE	ON	OFF
	MW-O-2	1/23/1991	71.90	25 - 40	SVE; TFE	ON	OFF
	GMW-O-11	5/20/1992	74.17	20 - 50	SVE; TFE	ON	OFF
	GMW-O-12	5/21/1992	73.49	20 - 50	SVE	ON	--
	GMW-O-20	6/15/1995	73.32	--	SVE; TFE	ON	OFF
	GMW-O-21	10/1/1997	71.43	26 - 46	TFE	--	OFF
	GMW-O-23	6/25/2007	73.63	20 - 40	SVE; TFE	ON	OFF
	MW-18 (MID)	6/10/1991	75.67	50 - 60	SVE	ON	--
HW-1	09/06/92	--	--	SVE	ON	--	
HW-2	09/06/92	--	--	SVE	ON	--	
BS-01	08/27/14	75.06	--	Biosparge	ON	--	
Southeastern	GMW-O-15	4/19/1994	74.23	20 - 50	SVE; TFE	ON	OFF
	GMW-O-18	7/25/1994	74.36	21 - 40	SVE; TFE	ON	OFF
	GMW-36	4/11/1994	76.66	20 - 50	SVE; TFE	ON	OFF
	GMW-SF-9	4/1/2003	73.05	37 - 46	TFE	--	--
	GMW-SF-10	4/2/2003	75.77	37 - 46	TFE	--	--
West Side Barrier	BW-2	5/20/1996	73.57	27 - 47	GWE	--	OFF
	BW-3	5/17/1996	74.16	31 - 50	GWE	--	OFF
	BW-4	5/20/1996	74.61	28 - 47	GWE	--	OFF
	BW-5	5/23/1996	73.59	27 - 46	GWE	--	OFF
	BW-6	5/22/1996	73.48	28 - 47	GWE	--	OFF
	BW-7	5/22/1996	74.65	27 - 46	GWE	--	OFF
	BW-8	5/21/1996	75.08	27 - 46	GWE	--	OFF
	BW-9	5/21/1996	76.19	27 - 46	GWE	--	OFF

Notes:

-- = information not available or not applicable

BS = biosparge

feet bgs = feet below ground surface

feet msl = feet above mean sea level based on the National Geodetic Vertical Datum of 1929

GWE = groundwater extraction

SVE = soil vapor extraction

TFE = total fluids extraction

Table 2. Vapor Remediation System Operation Summary

SFPP Norwalk Pump Station, Norwalk, California

System Inspection Date	Cumulative Hours of Operation (hours)	Incremental Hours of Operation (hours)	Influent PID Reading (ppmv as hexane)	System Flow (scfm)	Header Vacuum (in. H ₂ O)	Mass Removed (pounds) ^a
1995 Totals	1,240		--	--	--	281,065
1996 Totals	7,208	5,968	--	--	--	516,717
1997 Totals	12,865	5,657	--	--	--	489,526
1998 Totals	17,877	5,012	--	--	--	223,055
1999 Totals	23,600	5,723	--	--	--	390,836
2000 Totals	29,690	6,090	--	--	--	359,092
2001 Totals	33,671	3,981	--	--	--	224,091
2002 Totals	36,358	2,687	--	--	--	79,363
2003 Totals	39,676	3,319	--	--	--	64,671
2004 Totals	44,193	4,517	--	--	--	120,240
2005 Totals	49,750	5,557	--	--	--	212,175
2006 Totals	52,735	2,985	--	--	--	17,263
2007 Totals ³	58,319	2,058	--	--	--	7,378
2008 Totals	64,233	5,915	--	--	--	5,878
2009 Totals	68,858	4,625	--	--	--	9,387
2010 Totals	72,369	3,511	--	--	--	1,507
2011 Totals	77,489	5,120	--	--	--	14,629
2012 Totals	84,173	6,684	--	--	--	22,260
2013 Totals	90,414	6,241	--	--	--	90,880
2014 Totals	94,083	3,688	--	--	--	67,744
2015 Totals	98,408	4,325	--	--	--	122,706
First Quarter 2016 Totals	100,105	1,697	--	--	--	74,148
4/5/2016	100,270	165	1,754	1,837	70	5,180
4/12/2016	100,270	0	--	0	0	0
4/14/2016	100,270	0	1,625	2,346	60	0
4/19/2016	100,390	120	1,218	1,960	70	2,679
4/25/2016	100,511	122	1,218	2,113	70	0
4/26/2016	100,536	25	1,230	2,034	70	562
5/3/2016	100,702	166	1,838	1,922	75	5,544
5/10/2016	100,870	168	1,410	1,843	70	4,370
5/13/2016	100,948	77	1,518	1,837	75	2,165
5/17/2016	101,039	91	1,402	1,837	75	2,294
5/19/2016	101,055	16	1,350	1,998	70	394
5/24/2016	101,171	116	1,444	1,888	75	3,025
5/31/2016	101,340	168	1,500	1,800	75	4,502
6/7/2016	101,508	168	1,646	1,807	80	4,944
6/14/2016	101,671	163	1,590	1,816	80	4,788
6/21/2016	101,824	153	1,720	1,715	80	4,652
6/24/2016	101,900	76	1,720	1,720	80	2,318
Second Quarter 2016 Totals	101,900	3,492	--	--	--	47,416
Cumulative Totals	101,900	--	--	--	--	3,442,026

Notes:

^a The total mass removed is based on influent FID or PID readings, hours of operation, and flow rate.

-- = not applicable or not available

FID = flame ionization detector

in. H₂O = inches of water

PID = photoionization detector

ppmv = parts per million by volume

scfm = standard cubic feet per minute

TPH-g = total petroleum hydrocarbons quantified as gasoline (C4-C12)

Table 3. Remediation Well Vapor Concentrations
SFPP Norwalk Pump Station, Norwalk, California

Remediation Area	Remediation Well ID	Remediation Well Function	06/07/2016 (ppmv as Hexane) ^a
South-Central	MW-SF-1	SVE	982
	MW-SF-2	SVE; TFE	1,712
	MW-SF-3	SVE; TFE	2,562
	MW-SF-4	SVE	1,154
	MW-SF-5	SVE	318
	MW-SF-6	SVE; TFE	3,308
	MW-SF-9	SVE	2,196
	MW-SF-10	SVE	558
	MW-SF-11	SVE; TFE	Water in Line
	MW-SF-12	SVE; TFE	>5000
	MW-SF-13	SVE; TFE	1,200
	MW-SF-14	SVE; TFE	864
	MW-SF-15	SVE; TFE	1,436
	MW-SF-16	SVE; TFE	684
	MW-SF-17	SVE; TFE	684
	GMW-9	SVE; TFE	Water in Line
	GMW-10	SVE	>5000
	GMW-22	SVE; TFE	Water in Line
	GMW-24	SVE; TFE	894
	GMW-25	SVE; GWE	894
	GWR-3	SVE; GWE	>5000
	VEW-1	SVE	Water in Line
	VEW-2	SVE	2296
	MW-O-1	SVE; TFE	2742
	MW-O-2	SVE; TFE	1,066
	GMW-O-11	SVE; TFE	154
	GMW-O-12	SVE	>5000
	GMW-O-20	SVE; TFE	>5000
	GMW-O-23	SVE; TFE	>5000
	MW-18 (MID)	SVE	1,264
	HW-1	SVE	1,318
HW-2	SVE	1,994	
Southeastern	GMW-36	SVE; TFE	638
	GMW-O-15	SVE; TFE	638
	GMW-O-18	SVE; TFE	638

Notes:

^a Vapor readings measured in the field with an Eagle 2 photoionization detector (PID) calibrated using

-- = not applicable or not available

GWE = groundwater extraction

ppmv = parts per million by volume

SVE = soil vapor extraction

TFE = total fluids extraction

Table 4. Extracted Vapor Analytical Results^a

SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	ASTM D-1946			EPA TO-3		SCAQMD 25.1	EPA TO-15 (VOCs) ^b				
	Methane (%v)	Carbon Dioxide (%v)	Oxygen and Argon (%v)	TPH-g (ppmv)	TVOC (ppmv)	TGNMOC (ppmv)	Benzene (ppbv)	Ethylbenzene (ppbv)	Toluene (ppbv)	Xylenes (ppbv)	MTBE (ppbv)
8/3/2007	<0.5	<0.5	22.0	63	---	---	650	220	1,100	1,420	55
9/5/2007	<0.5	<0.5	22.0	9	---	---	32	48	140	320	18
10/2/2007	<0.5	<0.5	21.9	27	---	---	250	75	430	610	20
11/2/2007	<0.5	<0.5	22.1	5	---	---	40	10	74	95	7
2/1/2008	<0.5	<0.5	21.8	100	---	---	830	260	2,200	1,850	<50
3/4/2008	<0.5	<0.5	21.7	50	---	---	380	98	570	1,250	36
4/8/2008	<0.5	<0.5	22.2	69	---	---	290	110	480	1,040	41
5/23/2008	<0.5	<0.5	21.8	14	---	---	180	24	190	280	23
6/3/2008	<0.5	<0.5	21.7	30	---	---	380	42	400	330	70
7/2/2008	<0.5	<0.5	21.4	49	---	---	32	6	34	45	10
8/19/2008	<0.5	1.7	20.8	50	---	---	390	63	230	450	40
9/5/2008	<0.5	2.0	21.2	22	---	---	130	39	130	340	42
10/7/2008	<0.5	1.43	21.4	10	---	---	41	15	54	181	6.8
11/4/2008	<0.5	2.08	21.1	7.5	---	---	31	47	190	242	<2.0
3/6/2009	<0.5	<0.5	22.0	83	---	---	1,900	180	990	770	240
4/17/2009	<0.5	<0.5	22.2	3.1	---	---	140	8	37	68	26
5/29/2009	<0.5	1.08	21.0	130	---	---	1,700	640	3,700	3,100	100
8/18/2009	<0.5	0.78	21.7	28	---	---	380	37	290	310	33
8/25/2009	<0.5	0.87	20.6	37	---	---	500	44	320	293	20
9/18/2009	<0.5	0.37	21.6	11	---	---	75	11	39	107	3
10/29/2009	<0.5	1.80	18.2	77	---	---	350	45	250	440	4
11/25/2009	<0.5	<0.5	21.1	14	---	---	110	12	110	164	11
12/15/2009	<0.5	<0.5	21.7	7	---	---	28	3	20	47	<3.2
2/26/2010	<0.5	0.4	21.2	20	---	---	300	18	220	260	21
3/26/2010	<0.5	1.0	20.2	18	---	---	380	20	110	90	5
5/4/2010	<0.5	0.4	21.4	13	---	---	100	42	170	222	3
6/29/2010	<0.5	0.4	21.3	9	---	---	74	13	66	82	<5.0
8/3/2010	<0.5	0.6	20.4	29	---	---	210	13	64	85	9
8/31/2010	0.0039 ^c	<0.5	21.4	11	---	---	72	12	66	87	8
9/14/2010	<0.5	<0.5	21.6	6	---	---	63	15	57	84	<3.2
11/2/2010	--	--	--	11	---	---	140	<10	31	28	<10
11/17/2010	0.00075	0.4	22.0	--	---	---	--	--	--	--	--
12/28/2010	0.0052	0.27	22.0	16	---	---	160	37	230	324	4.5
1/14/2011	0.016	0.20	22.0	68	---	---	340	34	89	183	<10
2/8/2011	0.026	0.24	21.0	210	---	---	3,000	1,700	11,000	7,400	110
3/29/2011	0.013	0.13	20.0	5	---	---	170	15	18	41.5	<2.5
4/26/2011	0.0011	0.079	20.0	1.9	---	---	16	2.4	8.8	7.7	<1.2
5/17/2011	0.021	0.65	22.0	90	---	---	2,600	140	2,200	1,100	220
6/17/2011	0.001	0.20	22.0	3	---	---	59	8.1	31	56	<0.25
7/19/2011	0.0056	0.49	22.0	80	---	---	1,800	130	2,200	1,000	<31
8/16/2011	0.0026	0.31	22.0	140	---	---	3,000	600	4,000	2,330	490
9/20/2011	--	--	--	100	---	---	2,100	740.0	2,700	2,040	660
11/22/2011	0.070	0.70	20.0	11	---	---	150	12.0	67	35	<5.0
12/20/2011	0.020	0.34	22.0	0	---	---	110	<25	260	216	<25
1/10/2012	0.010	0.66	20.0	11	---	---	150	14	86	160	<12
2/28/2012	0.0067	0.90	20.0	27	---	---	140	42	140	224	<25
3/13/2012	0.0044	0.71	20.0	27	---	---	440	38	450	241	<25
4/27/2012	0.0290	0.22	21.0	39	---	---	540	42	630	299	<25
5/22/2012	0.0100	0.31	20.0	65	---	---	590	350	770	2,070	<12
6/19/2012	0.0028	0.41	21.0	17	---	---	130	26	150	162	<12
7/27/2012	0.0059	0.40	21.0	13	---	---	46	<5	33	78	<5
8/30/2012	0.0049	0.56	21.0	69	---	---	150	<25	66	194	<25
9/25/2012	0.0073	0.80	21.0	57	---	---	190	19	120	283	<2.5
10/30/2012	0.0099	0.96	21.0	50	---	---	380	<50	230	130	<50
12/11/2012	0.0074	0.84	21.0	53	---	---	130	17	110	173	<5.0

Table 4. Extracted Vapor Analytical Results^a
 SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	ASTM D-1946			EPA TO-3		SCAQMD 25.1	EPA TO-15 (VOCs) ^b				
	Methane (%v)	Carbon Dioxide (%v)	Oxygen and Argon (%v)	TPH-g (ppmv)	TVOC (ppmv)	TGNMOC (ppmv)	Benzene (ppbv)	Ethylbenzene (ppbv)	Toluene (ppbv)	Xylenes (ppbv)	MTBE (ppbv)
1/29/2013	0.0028	0.29	22.0	1.4	---	---	8.7	<1.2	9.4	9.6	<1.2
2/12/2013	0.0057	0.88	21.0	60	---	---	500	<50	440	400	<50
3/19/2013	0.0058	0.80	21.0	77	---	---	560	66	490	520	<40
4/16/2013	0.0079	0.74	21.0	53	---	---	430	29	240	193	<25
5/14/2013	0.017	1.6	19	280	---	---	1,700	190	1,800	840	<12
6/28/2013	0.0068	<0.010	21	22	---	---	190	<25	130	131	<25
SVE system down for repair from July 16, 2013, to September 17, 2013.											
9/20/2013	0.014	1	21	590	---	---	4,200	520	3,600	2,830	<40
10/15/2013	0.011	0.68	21	410	---	---	3,500	360	2,800	1,970	<20
11/12/2013	0.012	0.66	21	430	---	---	2,900	440	2,600	1,930	<15
12/10/2013	0.013	0.92	21	910	---	---	8,400	920	7,200	5,500	<50
1/17/2014	0.0077	0.57	21	350	---	---	6,600	6,800	8,200	23,300	3,000
2/11/2014	0.011	0.60	21	640	---	---	6,600	570	6,000	3,800	<100
3/21/2014	0.0050	0.40	21	390	---	---	4,500	290	4,000	1,930	<50
4/21/2014	0.011	0.65	21	700	---	---	6,900	370	6,900	3,400	<40
SVE system down for repair from April 29, 2014 to May 13, 2014.											
5/27/2014	0.011	0.56	21	530	---	---	6,600	570	8,900	3,820	<50
6/13/2014	0.0076	0.49	21	780	---	---	10,000	1,200	15,000	7,100	<80
SVE system down for repair and permit modification from July 1, 2014 to March 27, 2015.											
3/31/2015	0.090	1.3	20	1,400	---	1,300	12,000	1,000	11,000	7,400	<200
4/7/2015	0.014	0.56	21	---	---	710	8,200	8,200	610	3,260	<160
5/5/2015	---	---	---	---	---	760	6,100	1,100	9,600	7,200	<140
6/30/2015	0.0065	0.37	21	---	---	270	3,100	380	3,800	2,820	<160
7/14/2015	0.0094	0.62	21	---	---	650	7,000	950	7,900	6,100	<200
8/4/2015	0.0053	0.49	21	---	---	560	6,200	710	7,700	4,800	<0.097
8/17/2015 ^c	---	---	---	---	---	470	4,800	500	5,400	3,600	<0.099
8/17/2015 ^c	---	---	---	---	---	470	5,000	520	5,800	3,870	<0.100
8/17/2015 ^c	---	---	---	---	---	480	5,100	580	6,100	4,000	<0.097
8/17/2015 ^c	---	---	---	---	---	480	5,200	580	6,300	4,100	<0.099
9/1/2015 ^c	---	---	---	---	---	670	7,000	850	8,700	6,900	<0.097
9/1/2015 ^c	---	---	---	---	---	930	12,000	1,500	14,000	11,400	<0.140
9/1/2015 ^c	---	---	---	---	---	890	12,000	2,300	20,000	14,300	<0.140
10/6/2015	0.0067	0.43	21	---	---	960	14,000	3,100	25,000	15,900	<200
11/10/2015	0.0028	0.30	21	---	860	---	9,100	1,800	15,000	9,400	<97
12/10/2016	0.004	0.41	21	---	580	---	6,400	1,200	10,000	7,600	<120
1/4/2016 ^c	0.0059	0.27	22	---	750	---	9,600	2,400	20,000	13,500	<220
2/4/2016 ^c	0.0038	0.58	21	---	2,000	---	16,000	2,600	29,000	19,300	<610
3/3/2016 ^c	0.004	0.64	21	---	1,200	---	11,000	3,000	27,000	27,500	<130
4/5/2016	0.033	0.49	21	---	400	---	3,900	5,500	7,300	4,600	<63
5/13/2016	0.0034	0.50	21	---	290	---	2,200	300	4,300	810	<23
6/7/2016	0.0065	0.32	21	---	150	---	1,000	25 J	1,100	117 J	<36

Notes:

^a Influent vapor samples were collected from the manifold conveying soil vapors extracted from the south-central and southeastern areas.

^b Other detected VOCs are included in the laboratory analytical reports in Appendix A.

^c Influent vapor samples were collected after dilution before entrance into the SVE combustion chamber.

%v = percent by volume

<0.5 = not detected at or above the laboratory reporting limit shown

ASTM = ASTM International (formerly American Society for Testing and Materials)

EPA = U.S. Environmental Protection Agency

J = Resulting analyte concentration is between the reporting limit and the method detection limit.

MTBE = methyl tertiary butyl ether

ppbv = parts per billion by volume

ppmv = parts per million by volume

SCAQMD = South Coast Air Quality Management District

TGNMOC = total gaseous non-methane organic carbon

TPH-g = total petroleum hydrocarbons quantified as gasoline (C4-C12)

TVOC = total volatile organic compound

VOC = volatile organic compound

Table 5. Groundwater Remediation System Operation Summary

SFPP Norwalk Pump Station, Norwalk, California

System Inspection Date	Groundwater Removed from the South-Central and Southeastern Areas (gallons)	Groundwater Removed from the West Side Barrier Area (gallons)	Total Groundwater Removed (gallons)	Influent TPH-total (TPH-g, TPH-d, TPH-o) Concentration (µg/L)	Estimated Hydrocarbon Mass Removed from the South-Central, Southeastern, and West Side Barrier Areas (pounds) ^a	Product Recovery (gallons)
1996 Totals	1,802,103	0	1,802,103	--	273	4,995
1997 Totals	7,031,533	0	7,031,533	--		2,204
1998 Totals	4,064,700	0	4,064,700	--		856
1999 Totals	3,891,600	2,338,129	6,229,729	--	385	450
2000 Totals	2,290,580	2,454,971	4,745,551	--	295	230
2001 Totals	1,401,473	1,131,700	2,533,173	--	229	0
2002 Totals	1,452,229	2,931,167	4,383,396	--	110	10
2003 Totals	1,607,095	2,281,956	3,889,051	--	65	0
2004 Totals	1,695,361	3,854,470	5,549,831	--	229	83
2005 Totals	1,537,925	4,244,674	5,782,599	--	273	89
2006 Totals	1,699,567	5,089,615	6,789,182	--	684	0
2007 Totals	3,368,481	2,167,724	5,536,205	--		0
2008 Totals ^b	4,283,026	405,954	4,688,980	--	520	0
2009 Totals	2,309,627	0	2,309,627	--	105	0
2010 Totals ^c	3,342,227	2,244	3,344,471	--	363	0
2011 Totals	5,530,317	0	5,530,317	--	585	0
2012 Totals	7,368,318	0	7,368,318	--	699	0
2013 Totals	6,439,776	0	6,439,776	--	568	2
2014 Totals	3,410,458	0	3,410,458	--	2,236	2,335
2015 Totals	3,410,458	0	3,410,458	--	5,960	2,572
First Quarter 2016 Totals	767,657	0	767,657	--	4,203	194
4/1/2016	10,861	0	10,861	145,700	13.18	
4/2/2016	11,029	0	11,029	145,700	13.39	
4/3/2016	11,052	0	11,052	145,700	13.42	
4/4/2016	10,988	0	10,988	145,700	13.34	
4/5/2016	7,788	0	7,788	64,100	4.16	
4/6/2016	0	0	0	64,100	0.00	
4/7/2016	0	0	0	64,100	0.00	
4/8/2016	0	0	0	64,100	0.00	
4/9/2016	0	0	0	64,100	0.00	
4/10/2016	0	0	0	64,100	0.00	
4/11/2016	0	0	0	64,100	0.00	
4/12/2016	0	0	0	64,100	0.00	12
4/13/2016	0	0	0	64,100	0.00	
4/14/2016	2,432	0	2,432	64,100	1.30	

Table 5. Groundwater Remediation System Operation Summary

SFPP Norwalk Pump Station, Norwalk, California

System Inspection Date	Groundwater Removed from the South-Central and Southeastern Areas (gallons)	Groundwater Removed from the West Side Barrier Area (gallons)	Total Groundwater Removed (gallons)	Influent TPH-total (TPH-g, TPH-d, TPH-o) Concentration (µg/L)	Estimated Hydrocarbon Mass Removed from the South-Central, Southeastern, and West Side Barrier Areas (pounds) ^a	Product Recovery (gallons)
4/15/2016	6,447	0	6,447	64,100	3.44	
4/16/2016	6,484	0	6,484	64,100	3.46	
4/17/2016	6,395	0	6,395	64,100	3.42	
4/18/2016	4,708	0	4,708	64,100	2.51	
4/19/2016	5,579	0	5,579	64,100	2.98	
4/20/2016	4,913	0	4,913	64,100	2.62	
4/21/2016	7,625	0	7,625	64,100	4.07	
4/22/2016	11,749	0	11,749	64,100	6.27	
4/23/2016	11,596	0	11,596	64,100	6.19	
4/24/2016	8,400	0	8,400	64,100	4.49	
4/25/2016	7,320	0	7,320	64,100	3.91	
4/26/2016	11,130	0	11,130	64,100	5.94	
4/27/2016	12,129	0	12,129	64,100	6.48	
4/28/2016	12,037	0	12,037	64,100	6.43	
4/29/2016	12,008	0	12,008	64,100	6.41	
4/30/2016	9,336	0	9,336	64,100	4.99	
5/1/2016	9,544	0	9,544	64,100	5.10	
5/2/2016	9,952	0	9,952	64,100	5.31	
5/3/2016	9,803	0	9,803	23,280	1.90	
5/4/2016	10,316	0	10,316	23,280	2.00	
5/5/2016	9,916	0	9,916	23,280	1.92	
5/6/2016	10,104	0	10,104	23,280	1.96	
5/7/2016	10,225	0	10,225	23,280	1.98	
5/8/2016	10,392	0	10,392	23,280	2.02	
5/9/2016	10,627	0	10,627	23,280	2.06	
5/10/2016	11,707	0	11,707	23,280	2.27	
5/11/2016	13,519	0	13,519	23,280	2.62	
5/12/2016	13,472	0	13,472	23,280	2.61	
5/13/2016	15,410	0	15,410	23,280	2.99	
5/14/2016	12,020	0	12,020	23,280	2.33	
5/15/2016	11,071	0	11,071	23,280	2.15	
5/16/2016	10,697	0	10,697	23,280	2.07	
5/17/2016	10,115	0	10,115	23,280	1.96	
5/18/2016	6,101	0	6,101	23,280	1.18	
5/19/2016	3,580	0	3,580	23,280	0.69	

Table 5. Groundwater Remediation System Operation Summary

SFPP Norwalk Pump Station, Norwalk, California

System Inspection Date	Groundwater Removed from the South-Central and Southeastern Areas (gallons)	Groundwater Removed from the West Side Barrier Area (gallons)	Total Groundwater Removed (gallons)	Influent TPH-total (TPH-g, TPH-d, TPH-o) Concentration (µg/L)	Estimated Hydrocarbon Mass Removed from the South-Central, Southeastern, and West Side Barrier Areas (pounds) ^a	Product Recovery (gallons)
5/20/2016	13,260	0	13,260	23,280	2.57	
5/21/2016	10,755	0	10,755	23,280	2.09	
5/22/2016	9,658	0	9,658	23,280	1.87	
5/23/2016	9,807	0	9,807	23,280	1.90	
5/24/2016	12,853	0	12,853	23,280	2.49	
5/25/2016	18,559	0	18,559	23,280	3.60	
5/26/2016	16,844	0	16,844	23,280	3.27	
5/27/2016	16,707	0	16,707	23,280	3.24	
5/28/2016	15,821	0	15,821	23,280	3.07	
5/29/2016	15,533	0	15,533	23,280	3.01	
5/30/2016	15,813	0	15,813	23,280	3.07	
5/31/2016	15,886	0	15,886	23,280	3.08	
6/1/2016	15,953	0	15,953	23,280	3.09	
6/2/2016	14,869	0	14,869	23,280	2.88	
6/3/2016	15,080	0	15,080	23,280	2.92	
6/4/2016	12,529	0	12,529	23,280	2.43	
6/5/2016	7,024	0	7,024	23,280	1.36	
6/6/2016	15,652	0	15,652	23,280	3.04	
6/7/2016	15,622	0	15,622	23,280	3.03	
6/8/2016	14,329	0	14,329	23,280	2.78	
6/9/2016	10,059	0	10,059	23,280	1.95	
6/10/2016	16,478	0	16,478	23,280	3.20	
6/11/2016	16,538	0	16,538	23,280	3.21	
6/12/2016	16,536	0	16,536	23,280	3.21	
6/13/2016	16,372	0	16,372	23,280	3.18	
6/14/2016	15,008	0	15,008	6,580	0.82	
6/15/2016	10,303	0	10,303	6,580	0.56	
6/16/2016	10,143	0	10,143	6,580	0.56	
6/17/2016	10,975	0	10,975	6,580	0.60	
6/18/2016	4,472	0	4,472	6,580	0.25	
6/19/2016	9,888	0	9,888	6,580	0.54	
6/20/2016	9,885	0	9,885	6,580	0.54	
6/21/2016	10,115	0	10,115	6,580	0.55	10
6/22/2016	10,510	0	10,510	6,580	0.58	
6/23/2016	10,346	0	10,346	6,580	0.57	

Table 5. Groundwater Remediation System Operation Summary

SFPP Norwalk Pump Station, Norwalk, California

System Inspection Date	Groundwater Removed from the South-Central and Southeastern Areas (gallons)	Groundwater Removed from the West Side Barrier Area (gallons)	Total Groundwater Removed (gallons)	Influent TPH-total (TPH-g, TPH-d, TPH-o) Concentration (µg/L)	Estimated Hydrocarbon Mass Removed from the South-Central, Southeastern, and West Side Barrier Areas (pounds) ^a	Product Recovery (gallons)
6/24/2016	5,829	0	5,829	6,580	0.32	
6/25/2016	11	0	11	6,580	0.00	
6/26/2016	5	0	5	6,580	0.00	
6/27/2016	12	0	12	6,580	0.00	
6/28/2016	4	0	4	6,580	0.00	
6/29/2016	8	0	8	6,580	0.00	
6/30/2016	5	0	5	6,580	0.00	
Second Quarter 2016 Totals	856,633	0	856,633	--	253	22
Cumulative Total	70,497,263	26,902,604	97,399,867	--	19,357	14,042

Notes:

^a Estimated hydrocarbon mass removed (pounds) between 1996 and 2005 is based on concentrations of dissolved BTEX and MTBE in the groundwater influent and volume of groundwater extracted. Estimated hydrocarbon mass removed (pounds) between 2006 and 2011 is based on concentrations of TPH-g and TPH-fp in the groundwater influent and volume of groundwater extracted. Estimated hydrocarbon mass removed (pounds) between 2012 and 2015 is based on concentrations of dissolved TPH-total in the groundwater influent and volume of extracted groundwater.

^b Groundwater removal in the West Side Barrier area was discontinued in August 2008.

^c Groundwater extraction from West Side Barrier area wells BW-3 and BW-6 was resumed on May 14, 2010, to evaluate the efficacy of blending water with lower selenium concentrations from these wells with groundwater extracted from the south-central and southeastern areas. Groundwater removal from the West Side Barrier area was discontinued again on June 22, 2010.

-- = not applicable

µg/L = micrograms per liter

BTEX = benzene, toluene, ethylbenzene, and xylenes

MTBE = methyl tertiary butyl ether

TPH-d = total petroleum hydrocarbons quantified as diesel (C13-C22)

TPH-fp = total petroleum hydrocarbons quantified as fuel product (C7-C28)

TPH-g = total petroleum hydrocarbons quantified as gasoline (C4-C12)

TPH-o = total petroleum hydrocarbons quantified as oil (C23-C36)

TPH-total = total petroleum hydrocarbons quantified as gas, diesel, and oil (C4-C36)

Table 6. Extracted Groundwater Analytical Results^a
SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) ^b									
	TPH-g (µg/L)	TPH-d (µg/L)	TPH-o (µg/L)	TPH-total (µg/L)	TPH-fp (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	
3/6/1996	--	--	--	--	--	2,600	790	7,200	9,100	---	--	--	--	--	
7/23/1998	--	--	--	--	--	750	<10	360	300	---	--	--	--	--	
8/27/1998	--	--	--	--	--	1,000	71	530	800	---	--	--	--	--	
10/1/1998	--	--	--	--	--	1,200	<10	1,400	1,680	---	--	--	--	--	
11/19/1998	--	--	--	--	--	1,600	140	2,600	2,900	---	--	--	--	--	
12/17/1998	--	--	--	--	--	4,500	380	4,500	3,900	---	--	--	--	--	
1/28/1999	--	--	--	--	--	520	79	660	840	---	--	--	--	--	
3/25/1999	--	--	--	--	--	540	160	1,800	4,100	---	--	--	--	--	
4/2/1999	--	--	--	--	--	620	76	520	1,200	---	--	--	--	--	
4/15/1999	--	--	--	--	--	1,400	99	800	1,480	---	--	--	--	--	
5/6/1999	--	--	--	--	--	1,340	180	1,240	1,730	---	--	--	--	--	
6/3/1999	--	--	--	--	--	3,410	343	2,240	2,770	---	--	--	--	--	
8/5/1999	--	--	--	--	--	3,200	780	5,400	5,200	---	--	--	--	--	
9/23/1999	--	--	--	--	--	2,700	130	1,200	720	---	--	--	--	--	
9/30/1999	--	--	--	--	--	1,300	77	480	560	---	--	--	--	--	
10/13/1999	--	--	--	--	--	1,400	100	660	720	---	--	--	--	--	
11/4/1999	--	--	--	--	--	3,000	500	5,600	4,500	---	--	--	--	--	
12/9/1999	--	--	--	--	--	4,500	280	1,400	1,480	---	--	--	--	--	
1/13/2000	--	--	--	--	--	9,000	7,600	14,000	44,000	---	--	--	--	--	
2/11/2000	--	--	--	--	--	2,300	<100	1,200	1,240	3,100	--	--	--	--	
3/10/2000	--	--	--	--	--	380	20	110	430	740	--	--	--	--	
4/13/2000	--	--	--	--	--	1,300	550	450	920	970	--	--	--	--	
6/2/2000	--	--	--	--	--	840	56	240	980	920	--	--	--	--	
6/15/2000	--	--	--	--	--	1,600	82	900	990	2,700	--	--	--	--	
8/3/2000	--	--	--	--	--	1,900	410	3,500	4,400	2,700	--	--	--	--	
8/28/2000	--	--	--	--	--	620	33	200	380	1,800	--	--	--	--	
9/20/2000	--	--	--	--	--	460	<20	73	255	1,300	--	--	--	--	
10/25/2000	--	--	--	--	--	20	<20	<20	216	6,700	--	--	--	--	
11/15/2000	--	--	--	--	--	560	24	210	490	3,700	--	--	--	--	
3/22/2001	--	--	--	--	--	3,800	360	3,900	3,160	5,500	--	--	--	--	
4/30/2001	--	--	--	--	--	4,100	710	5,800	5,600	8,300	--	--	--	--	
5/23/2001	--	--	--	--	--	3,400	160	1,100	1,070	3,900	--	--	--	--	
6/22/2001	--	--	--	--	--	1,700	85	680	680	2,200	--	--	--	--	
7/16/2001	--	--	--	--	--	2,300	130	1,100	1,350	2,100	--	--	--	--	
9/5/2001	--	--	--	--	--	1,500	170	1,200	1,890	1,100	--	--	--	--	
1/23/2002	--	--	--	--	--	<0.5	<1	<1	<2	2	--	--	--	--	
2/28/2002	--	--	--	--	--	<0.5	<1	<1	<2	96	--	--	--	--	
3/25/2002	--	--	--	--	--	<0.5	<1	<1	<2	87	--	--	--	--	
5/1/2002	--	--	--	--	--	1,900	31	190	480	1,100	--	--	--	--	
5/17/2002	--	--	--	--	--	1,400	50	180	970	1,000	--	--	--	--	
6/4/2002	--	--	--	--	--	2,700	57	280	530	1,300	--	--	--	--	
7/18/2002	--	--	--	--	--	3,800	66	530	1,160	330	--	--	--	--	
8/8/2002	--	--	--	--	--	4,800	49	610	1,290	460	--	--	--	--	
9/3/2002	--	--	--	--	--	260	<5	5	71	600	--	--	--	--	
10/18/2002	--	--	--	--	--	1,200	70	490	820	570	--	--	--	--	
11/26/2002	--	--	--	--	--	1,300	68	130	590	860	--	--	--	--	
12/27/2002	--	--	--	--	--	1	<1	<1	<2	58	--	--	--	--	

Table 6. Extracted Groundwater Analytical Results^a

SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) ^b								
	TPH-g (µg/L)	TPH-d (µg/L)	TPH-o (µg/L)	TPH-total (µg/L)	TPH-fp (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
1/30/2003	--	--	--	--	--	<0.5	<1	<1	<2	37	--	--	--	--
2/26/2003	--	--	--	--	--	4	<1	<1	4	140	--	--	--	--
3/17/2003	--	--	--	--	--	2,800	23	170	480	570	--	--	--	--
4/30/2003	--	--	--	--	--	3,700	350	2,200	4,600	490	--	--	--	--
6/13/2003	--	--	--	--	--	1,200	17	120	510	740	--	--	--	--
6/19/2003	--	--	--	--	--	680	<10	35	239	680	--	--	--	--
7/3/2003	--	--	--	--	--	2,600	160	610	2,290	450	--	--	--	--
7/25/2003	--	--	--	--	--	300	6	3	39	230	--	--	--	--
8/20/2003	--	--	--	--	--	830	19	130	350	290	--	--	--	--
9/11/2003	--	--	--	--	--	270	<10	<10	46	420	--	--	--	--
10/16/2003	--	--	--	--	--	380	<10	<10	121	490	--	--	--	--
11/17/2003	--	--	--	--	--	93	6	22	106	200	--	--	--	--
12/19/2003	--	--	--	--	--	300	27	110	1,010	62	--	--	--	--
1/30/2004	--	--	--	--	--	700	140	740	1,740	22	--	--	--	--
2/17/2004	--	--	--	--	--	300	47	440	1,150	19	--	--	--	--
3/8/2004	--	--	--	--	--	52	<5.0	10	149	23	--	--	--	--
3/21/2004	--	--	--	--	--	420	11	29	318	120	--	--	--	--
6/28/2004	--	--	--	--	--	740	26	46	337	81	--	--	--	--
7/30/2004	--	--	--	--	--	660	18	68	280	87	--	--	--	--
8/27/2004	--	--	--	--	--	1,500	47	140	530	77	--	--	--	--
9/28/2004	--	--	--	--	--	400	10	32	252	64	--	--	--	--
10/15/2004	--	--	--	--	--	950	31	130	316	64	--	--	--	--
11/12/2004	--	--	--	--	--	2,100	1,500	390	15,800	3,000	--	--	--	--
12/10/2004	--	--	--	--	--	700	320	1,100	3,900	110	--	--	--	--
1/28/2005	--	--	--	--	--	460	140	520	2,260	610	--	--	--	--
2/25/2005	--	--	--	--	--	5,700	200	650	1,560	1,300	--	--	--	--
3/22/2005	--	--	--	--	--	<5	<10	<10	26	1,000	--	--	--	--
4/21/2005	--	--	--	--	--	680	8	21	108	420	--	--	--	--
5/20/2005	--	--	--	--	--	6	<5	9	50	<5	--	--	--	--
6/28/2005	--	--	--	--	--	450	80	690	1,030	1,600	--	--	--	--
7/27/2005	--	--	--	--	--	2,000	170	1,700	5,000	1,200	--	--	--	--
8/31/2005	--	--	--	--	--	660	34	320	670	220	--	--	--	--
9/28/2005	--	--	--	--	--	1,800	310	2,800	4,700	360	--	--	--	--
10/26/2005	--	--	--	--	--	940	330	1,800	3,600	530	--	--	--	--
11/30/2005	--	--	--	--	--	900	170	900	2,790	760	--	--	--	--
12/20/2005	--	--	--	--	--	2,500	350	2,600	4,100	2,300	--	--	--	--
7/11/2007	--	--	--	--	--	4,800	130	890	1,040	690	--	--	--	--
8/7/2007	14,000	--	--	--	11,000	5,400	140	1,100	770	540	--	--	--	--
9/25/2007	12,000	--	--	--	30,000	3,400	310	1,600	2,390	540	--	--	--	--
10/16/2007	8,900	--	--	--	8,400	3,400	94	520	660	390	--	--	--	--
11/2/2007	44,000	--	--	--	6,500	3,200	130	860	1,160	570	--	--	--	--
11/30/2007	6,000	--	--	--	5,200	1,800	48	170	490	450	--	--	--	--
12/21/2007	7,200	--	--	--	4,200	2,100	41	170	430	750	--	--	--	--

Table 6. Extracted Groundwater Analytical Results^a

SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) ^b								
	TPH-g (µg/L)	TPH-d (µg/L)	TPH-o (µg/L)	TPH-total (µg/L)	TPH-fp (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
1/4/2008	4,300	--	--	--	7,200	3,300	49	300	540	620	--	--	--	--
1/18/2008	11,000	--	--	--	2,200	3,600	140	650	850	620	--	--	--	--
2/1/2008	8,700	--	--	--	5,700	3,600	100	440	930	560	--	--	--	--
3/4/2008	7,200	--	--	--	4,900	3,900	120	510	770	620	--	--	--	--
4/8/2008	8,100	--	--	--	10,000	2,800	96	280	580	640	--	--	--	--
5/6/2008	5,300	--	--	--	2,800	2,900	76	190	328	430	--	--	--	--
6/3/2008	8,400	--	--	--	6,800	3,700	110	450	480	320	--	--	--	--
7/2/2008	9,200	--	--	--	4,300 ^c	4,500	75	620	650	400	--	--	--	--
8/19/2008	4,000	--	--	--	6,600	2,600	57	76	215	450	--	--	--	--
9/5/2008	160	--	--	--	<500	<12	<25	<25	<25	<25	--	--	--	--
10/7/2008	<100	--	--	--	<500	0.36 J	<1.0	<1.0	1.59	1.7	--	--	--	--
11/4/2008	12,000	--	--	--	660,000	2,500	140	220	760	160	--	--	--	--
12/4/2008	1,300	--	--	--	1,500	600	8.2	28	73	130	--	--	--	--
1/6/2009	1,500	--	--	--	980	560	23	41	110	320	--	--	--	--
3/6/2009	2,500	--	--	--	1,500	1,100	33	51	114	65	--	--	--	--
4/7/2009	3,100	--	--	--	6,900	1,100	36	230	207	210	--	--	--	--
5/13/2009	690	--	--	--	1,500	120	3.2	14	60	24	--	--	--	--
6/12/2009	150	--	--	--	<500	<0.50	<1.0	<1.0	0.71 J	44	--	--	--	--
7/10/2009	4,500	--	--	--	560	1,500	41	68	175	150	--	--	--	--
8/4/2009	2,000	--	--	--	1,000	1,200	16	18	64	100	--	--	--	--
9/1/2009	4,800	--	--	--	3,500	380	45	25	328	5.4 J	--	--	--	--
10/6/2009	3,900	--	--	--	4,600	3,200	21	15	35	82	--	--	--	--
10/27/2009	1,000	--	--	--	<500	520	4	15	10	180	--	--	--	--
11/3/2009	120	--	--	--	<500	2	0.55 J	0.61 J	3	40	--	--	--	--
11/25/2009	5,700	--	--	--	4,000	3,100	26	13	48	88	--	--	--	--
2/16/2010	8,000	--	--	--	5,900	4,700	110	1,300	800	1,800	--	--	--	--
3/9/2010	7,000	--	--	--	5,900	6,600	110	460	550	410	--	--	--	--
4/20/2010	10,000	--	--	--	11,000	6,000	44	230	174	130	--	--	--	--
5/14/2010	8,500	--	--	--	2,100	3,600	67	380	400	210	--	--	--	--
6/25/2010	4,600	--	--	--	2,600	2,200	61	540	380	170	--	--	--	--
7/20/2010	21,000	--	--	--	21,000	3,400	370	3,000	2,550	2,300	--	--	--	--
8/3/2010	3,400	--	--	--	1,500	1,400	17	140	161	390	--	--	--	--
8/10/2010	5,800	--	--	--	3,400	2,600	40	190	169	140	--	--	--	--
9/14/2010	9,400	--	--	--	10,000	4,900	170	1,100	1,340	380	--	--	--	--
10/12/2010	5,700	--	--	--	1,000	2,200	43	140	138	120	--	--	--	--
11/16/2010	1,100	--	--	--	1,600	290	4	15	78	84	--	--	--	--
12/14/2010	7,100	--	--	--	3,200	2,600	76	200	315	340	--	--	--	--

Table 6. Extracted Groundwater Analytical Results^a

SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) ^b								
	TPH-g (µg/L)	TPH-d (µg/L)	TPH-o (µg/L)	TPH-total (µg/L)	TPH-fp (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
1/14/2011	7,400	--	--	--	3,500	3,700	56	110	220	280	--	--	--	--
2/8/2011	5,600	--	--	--	3,500	2,400	43	110	190	420	--	--	--	--
3/25/2011	3,100	--	--	--	1,200	1,300	51	92	200	300	--	--	--	--
4/26/2011	1,400	--	--	--	1,200	610	5.8	5.7	20	130	--	--	--	--
5/17/2011	3,300	--	--	--	1,700	3,600	82	180	300	240	--	--	--	--
6/21/2011	1,200	--	--	--	720	860	9.6	31	82	190	2,200	6.6	<0.07	<0.1
7/27/2011	14,000	10,000	44J	--	-- ^d	2,800	150	490	2,100	350	2,800	27	<0.07	<0.1
8/26/2011	7,400	--	--	--	57,000	1,400	120	480	1,300	270	1,600	16	<0.07	<0.1
9/23/2011	6,400	--	--	--	2,800	2,800	83.0	160	340	300	1,300	22	<0.07	<0.1
10/25/2011	6,000	--	--	--	2,300	3,000	52	93	200	200	970	20	<0.70	<1.0
11/22/2011	5,900	--	--	--	2,000	3,600	62	140	240	300	2,900	26	<0.07	<0.1
12/20/2011	780	--	--	--	2,000	330	8	14	43	160	1,000	18	<0.07	<0.1
1/10/2012	5,300	--	--	--	1,900	3,400	36	70	170	200	960	26	<0.07	<0.1
2/21/2012	4,900	--	--	--	<13	3,400	19	16	48	120	2,200	21	<0.07	<0.1
3/13/2012	6,100	--	--	--	2,100	2,900	43	79	180	120	1,600	23	<0.07	<0.1
4/27/2012	5,100	--	--	--	2,200	3,800	49	61	150	150	500	38	<0.13	<0.12
5/22/2012	6,800	--	--	--	31,000	2,800	49	140	262	150	690	30	<0.13	<0.12
6/19/2012	5,300	--	--	--	36,000	3,200	45	230	200	220	2,800	33	<0.13	<0.12
7/20/2012	5,600	2,400	210	8,200	--	3,000	71	72	510	170	2,700	26	<0.13	<0.12
8/21/2012	3,600	1,100	140	4,900	--	2,400	26	41	80	110	1,500	22	<0.13	<0.12
9/25/2012	2,100	710	71	2,800	--	1,700	25	35	86	150	690	17	<1.0	<1.0
10/30/2012	2,600	700	74	3,374	--	1,400	15	13	52	54	1,200	14	<0.061	<0.054
11/30/2012	860	8,200	260	9,320	--	1,100	2.4	4.4	12	23	690	<0.038	<0.061	<0.054
12/27/2012	6,200	820	86	7,106	--	2,000	39	76	130	120	1,300	20	<0.061	<0.054
1/15/2013	3,400	14,000	400	17,800	--	800	12	25	130	43	1,200	8.7	<0.061	<0.054
2/12/2013	9,900	3,100	150	13,150	--	2,100	110	440	820	110	330	22	<0.061	<0.054
3/5/2013	3,954	970	80	5,004	--	1,400	21	23	87	63	1,200	15	<0.061	<0.054
3/15/2013	--	--	--	--	--	1,400	25	49	98	74	570	14	<0.061	<0.054
4/16/2013	1,100	1,300	270	2,670	--	370	6	19	56	73	530	17	<0.061	<0.054
5/14/2013	4,300	830	99	5,229	--	2,000	52	98	181	61	270	22	<0.061	<0.054
6/28/2013	2,900	870	150	3,920	--	1,100	18	58	76	92	500	11	<0.061	<0.054
7/16/2013	3,600	1,000	130	4,730	--	870	19	47	140	100	600	14	<0.061	<0.054
8/16/2013	3,800	5,900	530	10,230	--	1,400	13	32	85	77	550	27	<0.061	<0.054
9/24/2013	5,800	12,000	550	18,350	--	990	53	400	630	78	440	20	<0.061	<0.054
10/15/2013	3,300	650	120	4,070	--	1,400	11	37	150	43	250	15	<0.061	<0.054
11/12/2013	5,600	3,500	190	9,290	--	570	99	230	660	89	550	20	<0.061	<0.054
12/13/2013	12,500	14,000	400	26,900	--	560	170	690	1,500	52	220	17	<0.061	<0.054

Table 6. Extracted Groundwater Analytical Results^a
SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) ^b								
	TPH-g (µg/L)	TPH-d (µg/L)	TPH-o (µg/L)	TPH-total (µg/L)	TPH-fp (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
1/17/2014	5,900	980	130	7,010	--	4,200	13	18	61	89	810	40	<0.061	<0.054
2/11/2014	12,000	63,000	2,500	77,500	--	640	130	560	1,990	45	290	12	<0.061	<0.054
3/21/2014	42,000	77,000	2,000	121,000	--	3,700	440	3,300	3,900	100	360	17	<0.061	<0.054
4/21/2014	100,000	30,000	880	130,000	--	6,000	1,300	9,800	9,000	<0.098	<1.0	12	<0.061	<0.054
5/20/2014	33,000	15,000	470	48,000	--	1,400	570	2,700	5,400	30	<0.40	16	<0.061	<0.054
6/13/2014	77,000	33,000	1,100	110,000	--	7,700	1,900	10,000	13,000	38	<0.40	12	<0.061	<0.054
7/12/2014	28,000	82	<52	28,082	--	2,800	820	3,700	6,800	34	<0.40	18J	<25	<25
The GWTS was down between July 29, 2014 and December 1, 2014 to facilitate processing of the modifications to SCAQMD Permit No. F14166 for the GWTS.														
1/15/2015	8,000	5,600	270	13,870	--	2,200	22	140	430	21	390	11	<0.12	<0.11
2/20/2015	120,000	47,000	1,500	170,000	--	3,000	350	1,600	3,000	43	<0.80	17	<0.12	<0.11
3/3/2015	65,000	480,000	15,000	560,000	--	6,600	1,700	9,300	12,000	670	<0.80	11	<0.12	<0.11
4/7/2015	105,000	92,000	2,900	200,000	--	9,000	2,100	18,000	13,000	1,200	<0.80	8.7	<0.12	17
5/19/2015	73,000	90,000	2,400	165,400	--	8,200	1,600	17,000	12,000	380	<0.60	25	<0.078	<0.078
6/2/2015	78,000	89,000	3,100	170,100	--	3,200	530	3,700	7,100	1,100	<0.60	13	<0.078	8.3
7/30/2015	31,000	16,000	570	47,570	--	3,100	720	5,100	6,200	820	<0.60	27	<0.078	6.2
8/6/2015	30,000	17,000	570	37,570	--	2,600	500	3,100	6,200	700	<0.60	16	<0.078	6.4
9/15/2015	50,000	79,000	2,700	129,000	--	3,200	1,800	6,500	14,000	820	<0.60	15	<0.078	7.7
10/8/2016	51,000	55,000	1,800	107,800	--	5,700	1,400	11,000	11,000	680	<0.60	16	<0.078	6.2
11/24/2015	45,000	74,000	2,800	121,800	--	3,400	1,100	7,000	7,800	<0.31	<1.5	16	<0.20	<0.20
12/3/2015	40,000	120,000	4,000	164,000	--	4,800	1,100	7,700	8,300	580	<1.5	19	<0.20	5.9
1/21/2016	88,000	2,500,000	97,000	2,685,000	--	4,200	1,700	10,000	14,000	380	<0.60	12	<0.078	<0.078
2/2/2016	31,000	110,000	4,700	145,700	--	2,600	750	4,600	9,500	430	<0.60	8.6	<0.078	<0.078
4/5/2016	32,000	31,000	1,100	64,100	--	1,500	450	2,200	12,000	390	<3.0	<0.17	<0.39	<0.39
5/3/2016	2,600	20,000	680	23,280	--	990	18	83	260	6.0	100	7.1	<0.039	<0.039
6/14/2016	1,900	4,400	280	6,580	--	290	21	110	400	8.6	<5.0	6.00	<1.0	<1.0

Notes:

^a Influent samples were collected from the manifold conveying groundwater extracted from the south-central and southeastern areas

^b Other detected VOCs are included in the laboratory analytical reports in Appendix A

^c TPH-fp result from extracted groundwater sample collected on July 10, 2008

^d July 27, 2011, sample and samples after July 20, 2012, were analyzed for TPH-g, TPH-d, and TPH-o

-- = not analyzed

<500 = Not detected at or above the laboratory reporting limit (RL) shown

µg/L = micrograms per liter

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

J = Analyte was detected above the laboratory method detection limit and below the laboratory RI

MTBE = methyl tertiary butyl ether

TAME = tertiary amyl methyl ether

TBA = tertiary butyl alcohol

TPH-d = total petroleum hydrocarbons quantified as diesel (C13-C22)

TPH-fp = total petroleum hydrocarbons quantified as fuel product (C7-C28)

TPH-g = total petroleum hydrocarbons quantified as gasoline (C4-C12)

TPH-o = total petroleum hydrocarbons quantified as oil (C23-C36)

TPH-total = total petroleum hydrocarbons quantified as gasoline, diesel, and oil (C4-C36)

Table 7. Biosparge System Operation Summary
SFPP Norwalk Pump Station, Norwalk, California

System Inspection Date	Cumulative Hours of Operation (hours)	Incremental Hours of Operation (hours)	Incremental Uptime (%)	System Flow ^a (scfm)	BS-01 Sparge Leg Pressure (psi)
First Quarter 2016 Totals	1,524	1,524	74.7	--	--
4/5/2016	1,644	120	99.2	120	7
4/15/2016	1,645	1	0.4	120	8
4/19/2016	1,735	90	99.4	240	9
4/25/2016	1,856	121	84.6	120	8
4/26/2016	1,881	25	87.7	240	8
4/29/2016	1,955	74	100.0	240	7
5/10/2016	1,955	0	0.0	240	8
5/17/2016	2,123	168	99.8	240	6
5/19/2016	2,140	17	36.9	120	5
5/24/2016	2,254	114	94.4	360	6
5/31/2016	2,422	168	98.7	360	7
6/7/2016	2,591	169	100.0	420	7
6/14/2016	2,754	163	95.3	420	8
6/21/2016	2,906	152	92.7	420	8
6/24/2016	2,982	76	99.6	420	8
Second Quarter 2016 Totals	2,982	1,458	71.5	--	--
Cumulative Totals	2,982	--	73.1	--	--

Notes:

^a Estimated system flow based on header flowmeter

-- = not applicable or not available

psi = pounds per square inch

scfm = standard cubic feet per minute

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
GMW-9	4/30/2007	74.44	26.71	---	---	47.73	Secor
	11/12/2007	74.44	27.32	27.04	0.28	47.34	Secor
	8/8/2008	74.44	28.01	27.96	0.05	46.47	Envent
	10/16/2008	74.44	28.36	28.35	0.01	46.09	Envent
	12/17/2008	74.44	27.61	---	---	46.83	Envent
	1/15/2009	74.44	28.91	---	---	45.53	Envent
	3/27/2009	74.44	29.04	---	---	45.40	Envent
	4/21/2009	74.44	28.16	---	---	46.28	Envent
	7/21/2009	74.44	28.31	---	---	46.13	Envent
	10/19/2009	74.44	NM	---	---	NC	Blaine Tech
	5/24/2010	74.44	30.47	---	---	43.97	Blaine Tech
	5/28/2010	74.44	30.35	---	---	44.09	Blaine Tech
	10/4/2010	74.44	30.30	---	---	44.14	Blaine Tech
	1/10/2011	74.44	32.02	---	---	42.42	Blaine Tech
	4/11/2011	74.44	25.41	---	---	49.03	Blaine Tech
	7/11/2011	74.44	NM	---	---	NC	
	10/10/2011	74.44	28.91	---	---	45.53	Blaine Tech
	4/16/2012	74.44	31.15	---	---	43.29	Blaine Tech
	7/9/2012	---	31.64	---	---	NC	Blaine Tech
	10/15/2012	77.16	31.82	---	---	45.34	Blaine Tech
	1/14/2013	77.16	31.88	---	---	45.28	Blaine Tech
	4/8/2013	77.16	31.83	---	---	45.33	Blaine Tech
	10/7/2013	77.16	35.30	31.25	4.05	45.02	Blaine Tech
	4/14/2014	77.16	37.66	31.65	6.01	44.19	Blaine Tech
	5/5/2014	77.16	37.81	31.76	6.05	44.07	Nieto & Sons
	5/12/2014	77.16	37.39	31.83	5.56	44.11	Nieto & Sons
	5/20/2014	77.16	37.70	33.85	3.85	42.46	Nieto & Sons
	5/27/2014	77.16	32.41	28.84	3.57	47.53	Nieto & Sons
	6/4/2014	77.16	33.20	---	---	43.96	Nieto & Sons
	6/10/2014	77.16	37.51	32.77	4.74	43.35	Nieto & Sons
	7/3/2014	77.16	39.26	32.59	6.67	43.10	Nieto & Sons
	7/8/2014	77.16	38.59	32.45	6.14	43.36	Blaine Tech
	7/18/2014	77.16	37.15	32.73	4.42	43.46	Blaine Tech
	7/24/2014	77.16	37.78	32.48	5.30	43.51	Blaine Tech
	8/1/2014	77.16	36.72	32.30	4.42	43.89	Blaine Tech
	8/8/2014	77.16	36.55	32.26	4.29	43.96	Blaine Tech
	8/13/2014	77.16	36.25	32.33	3.92	43.97	Blaine Tech
	8/19/2014	77.16	36.04	32.38	3.66	43.97	Blaine Tech
	8/29/2014	77.16	36.23	32.33	3.90	43.97	Blaine Tech
	9/5/2014	77.16	36.26	32.35	3.91	43.95	Blaine Tech
	9/11/2014	77.16	36.27	32.33	3.94	43.96	Blaine Tech
	9/18/2014	77.16	36.42	32.37	4.05	43.90	Blaine Tech
9/26/2014	77.16	36.39	32.35	4.04	43.92	Blaine Tech	
10/1/2014	77.16	36.11	32.42	3.69	43.93	Blaine Tech	
10/6/2014	77.16	35.99	32.42	3.57	43.95	Blaine Tech	
10/14/2014	77.16	36.24	32.34	3.90	43.96	Blaine Tech	
10/23/2014	77.16	36.32	32.35	3.97	43.94	Blaine Tech	
10/27/2014	77.16	36.04	32.42	3.62	43.94	Blaine Tech	
11/3/2014	77.16	36.40	32.35	4.05	43.92	Blaine Tech	
11/10/2014	77.16	36.32	32.41	3.91	43.89	Blaine Tech	
11/18/2014	77.16	36.28	32.43	3.85	43.88	Blaine Tech	
11/25/2014	77.16	36.21	32.49	3.72	43.85	Blaine Tech	
12/3/2014	77.16	36.18	32.43	3.75	43.90	Blaine Tech	
12/12/2014	77.16	36.58	32.74	3.84	43.58	Blaine Tech	
12/19/2014	77.16	37.05	32.76	4.29	43.46	Blaine Tech	
3/6/2015	77.16	39.40	33.13	6.27	42.65	Kinder Morgan	
4/20/2015	77.16	36.98	32.99	3.99	43.29	Blaine Tech	
10/20/2015	77.16	34.61	34.37	0.24	42.74	Kinder Morgan	
3/14/2016	77.16	36.10	---	---	41.06	Blaine Tech	
4/11/2016	77.16	36.20	---	---	40.96	Blaine Tech	
6/30/2016	77.16	31.02	---	---	46.14	Kinder Morgan	
GMW-10	4/30/2007	74.67	25.90	---	---	48.77	Secor
	11/12/2007	74.67	25.02	25.82	0.83	50.33	Secor
	4/14/2008	74.67	25.38	25.44	0.06	49.34	Secor
	10/13/2008	74.67	24.16	---	---	50.51	Stantec
	4/20/2009	74.67	24.46	---	---	50.21	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	10/19/2009	74.67	27.20	---	---	47.47	Blaine Tech
	5/24/2010	74.67	26.72	---	---	47.95	Blaine Tech
	5/28/2010	74.67	26.70	---	---	47.97	Blaine Tech
	10/4/2010	74.67	27.15	---	---	47.52	Blaine Tech
	4/11/2011	74.67	25.21	---	---	49.46	Blaine Tech
	10/10/2011	74.67	27.75	---	---	46.92	Blaine Tech
	4/27/2012	74.67	28.47	---	---	46.20	Blaine Tech
	7/9/2012	74.67	NM	---	---	NC	Blaine Tech
	10/15/2012	74.67	29.15	29.02	0.13	45.63	Blaine Tech
	4/8/2013	74.67	33.64	28.12	5.52	45.53	Blaine Tech
	9/26/2013	73.35	36.15	29.25	6.90	42.82	Blaine Tech
	10/7/2013	73.35	31.85	29.32	2.53	43.56	Blaine Tech
	4/14/2014	73.35	29.43	29.01	0.42	44.26	Blaine Tech
	8/19/2014	73.35	29.80	29.53	0.27	43.77	Blaine Tech
	8/29/2014	73.35	29.68	29.25	0.43	44.02	Blaine Tech
	9/26/2014	73.35	29.98	29.23	0.75	43.98	Blaine Tech
	10/1/2014	73.35	29.98	29.19	0.79	44.01	Blaine Tech
	10/6/2014	73.35	30.01	29.16	0.85	44.03	Blaine Tech
	10/14/2014	73.35	30.01	29.18	0.83	44.02	Blaine Tech
	10/23/2014	73.35	30.17	29.15	1.02	44.01	Blaine Tech
	10/27/2014	73.35	30.19	29.12	1.07	44.03	Blaine Tech
	11/3/2014	73.35	30.25	29.13	1.12	44.01	Blaine Tech
	11/10/2014	73.35	29.85	29.28	0.57	43.96	Blaine Tech
	11/18/2014	73.35	29.95	29.28	0.67	43.95	Blaine Tech
	11/25/2014	73.35	30.00	29.27	0.73	43.94	Blaine Tech
	12/3/2014	73.35	30.18	29.27	0.91	43.91	Blaine Tech
	12/12/2014	73.35	30.81	29.45	1.36	43.65	Blaine Tech
	12/19/2014	73.35	30.51	30.35	0.16	42.97	Blaine Tech
	4/20/2015	73.35	34.99	28.42	6.57	43.71	Blaine Tech
	7/17/2015	73.35	36.10	29.41	6.69	42.70	Blaine Tech
	10/20/2015	73.35	32.96	31.02	1.94	41.97	Kinder Morgan
	3/16/2016	73.35	34.47	33.42	1.05	39.74	Kinder Morgan
	4/11/2016	73.35	33.70	32.10	1.60	40.95	Blaine Tech
	6/29/2016	73.35	33.02	---	---	40.33	Blaine Tech
GMW-22	4/30/2007	74.17	25.79	---	---	48.38	Secor
	11/12/2007	74.17	26.45	25.91	0.54	48.16	Stantec
	8/12/2008	74.17	26.70	---	---	47.47	Envent
	10/31/2008	74.17	28.25	27.04	1.21	46.91	Envent
	11/4/2008	74.17	26.97	---	---	47.20	Envent
	12/17/2008	74.17	26.65	---	---	47.52	Envent
	1/15/2009	74.17	27.18	---	---	46.99	Envent
	3/27/2009	74.17	27.86	---	---	46.31	Envent
	4/21/2009	74.17	27.30	27.20	0.10	46.95	Envent
	7/21/2009	74.17	27.70	---	---	46.47	Envent
	10/19/2009	74.17	NM	---	---	NC	Blaine Tech
	11/6/2009	74.17	28.12	---	---	46.05	Kinder Morgan
	9/3/2010	74.17	28.36	25.10	3.26	48.47	Kinder Morgan
	10/4/2010	74.17	27.65	---	---	46.52	Blaine Tech
	4/11/2011	74.17	26.45	---	---	47.72	Blaine Tech
	10/10/2011	74.17	29.68	---	---	44.49	Blaine Tech
	4/16/2012	74.17	31.15	---	---	43.02	Blaine Tech
	7/9/2012	---	NM	---	---	NC	Blaine Tech
	10/15/2012	77.24	31.05	---	---	46.19	Blaine Tech
	4/8/2013	77.24	31.92	---	---	45.32	Blaine Tech
	10/7/2013	77.24	34.28	31.65	2.63	45.10	Blaine Tech
	4/14/2014	77.24	35.59	32.30	3.29	44.33	Blaine Tech
	5/6/2014	77.24	35.87	32.35	3.52	44.24	Nieto & Sons
	5/12/2014	77.24	35.76	32.28	3.48	44.32	Nieto & Sons
	5/20/2014	77.24	37.90	32.70	5.20	43.58	Nieto & Sons
	5/27/2014	77.24	36.34	32.71	3.63	43.86	Nieto & Sons
	6/4/2014	77.24	33.36	---	---	43.88	Nieto & Sons
	6/10/2014	77.24	36.74	32.82	3.92	43.69	Nieto & Sons
	7/3/2014	77.24	37.66	32.91	4.75	43.45	Nieto & Sons
	7/8/2014	77.24	36.70	32.79	3.91	43.73	Blaine Tech
	7/18/2014	77.24	36.68	32.77	3.91	43.75	Blaine Tech
	7/24/2014	77.24	36.79	32.62	4.17	43.85	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	8/1/2014	77.24	35.82	32.44	3.38	44.17	Blaine Tech
	8/8/2014	77.24	35.72	32.44	3.28	44.19	Blaine Tech
	8/13/2014	77.24	35.68	32.45	3.23	44.19	Blaine Tech
	8/19/2014	77.24	35.64	32.45	3.19	44.20	Blaine Tech
	8/29/2014	77.24	35.65	32.44	3.21	44.21	Blaine Tech
	9/5/2014	77.24	35.73	32.46	3.27	44.18	Blaine Tech
	9/11/2014	77.24	35.78	32.47	3.31	44.16	Blaine Tech
	9/18/2014	77.24	35.85	32.49	3.36	44.13	Blaine Tech
	9/26/2014	77.24	35.85	32.46	3.39	44.15	Blaine Tech
	10/1/2014	77.24	35.76	32.45	3.31	44.18	Blaine Tech
	10/6/2014	77.24	35.72	32.44	3.28	44.19	Blaine Tech
	10/14/2014	77.24	35.75	32.42	3.33	44.20	Blaine Tech
	10/23/2014	77.24	35.84	32.43	3.41	44.18	Blaine Tech
	10/27/2014	77.24	35.74	32.41	3.33	44.21	Blaine Tech
	11/3/2014	77.24	35.89	32.45	3.44	44.15	Blaine Tech
	11/10/2014	77.24	35.94	32.45	3.49	44.14	Blaine Tech
	11/18/2014	77.24	35.97	32.48	3.49	44.11	Blaine Tech
	11/25/2014	77.24	35.97	32.51	3.46	44.09	Blaine Tech
	12/3/2014	77.24	35.84	32.45	3.39	44.16	Blaine Tech
	12/12/2014	77.24	36.44	32.65	3.79	43.89	Blaine Tech
	12/19/2014	77.24	36.80	34.71	2.09	42.14	Blaine Tech
	4/20/2015	77.24	36.64	32.84	3.80	43.70	Blaine Tech
	7/24/2015	77.24	39.80	33.70	6.10	42.41	Northstar
	10/20/2015	77.24	36.10	34.92	1.18	42.10	Kinder Morgan
	3/16/2016	77.24	39.73	37.61	2.12	39.24	Kinder Morgan
	4/11/2016	77.24	38.59	35.50	3.09	41.17	Blaine Tech
	6/30/2016	77.24	36.55	---	---	40.69	Blaine Tech
GMW-24	4/30/2007	74.04	27.07	---	---	46.97	Secor
	11/12/2007	74.04	27.50	27.46	0.04	46.57	Stantec
	8/12/2008	74.04	NM	---	---	NC	Envent
	8/19/2008	74.04	29.34	28.24	1.10	45.58	Envent
	10/17/2008	74.04	30.88	29.90	0.98	43.94	Envent
	10/21/2008	74.04	29.64	28.30	1.34	45.47	Envent
	12/18/2008	74.04	29.04	---	---	45.00	Envent
	1/15/2009	74.04	30.56	29.80	0.76	44.09	Envent
	3/20/2009	74.04	31.28	---	---	42.76	Envent
	3/27/2009	74.04	30.45	---	---	43.59	Envent
	4/21/2009	74.04	29.91	---	---	44.13	Envent
	7/21/2009	74.04	32.78	---	---	41.26	Envent
	10/19/2009	74.04	NM	---	---	NC	Blaine Tech
	2/4/2010	74.04	29.67	29.40	0.27	44.59	Kinder Morgan
	6/22/2010	74.04	29.47	---	---	44.57	Blaine Tech
	9/3/2010	74.04	29.90	---	---	44.14	Kinder Morgan
	10/4/2010	74.04	29.50	---	---	44.54	Blaine Tech
	4/11/2011	74.04	28.21	---	---	45.83	Blaine Tech
	10/10/2011	74.04	28.78	---	---	45.26	Blaine Tech
	4/16/2012	74.04	30.49	30.31	0.18	43.69	Blaine Tech
	7/9/2012	---	NM	---	---	NC	Blaine Tech
	10/15/2012	77.48	31.34	---	---	46.14	Blaine Tech
	4/8/2013	77.48	NM	---	---	NC	Blaine Tech
	6/14/2013	77.48	33.35	32.40	0.95	44.89	Blaine Tech
	10/7/2013	77.48	35.42	31.61	3.81	45.11	Blaine Tech
	4/14/2014	77.48	37.74	32.01	5.73	44.32	Blaine Tech
	5/5/2014	77.48	37.81	32.09	5.72	44.25	Nieto & Sons
	5/12/2014	77.48	37.52	32.14	5.38	44.26	Nieto & Sons
	5/20/2014	77.48	37.39	32.21	5.18	44.23	Nieto & Sons
	5/27/2014	77.48	37.95	32.90	5.05	43.57	Nieto & Sons
	6/4/2014	77.48	37.00	32.70	4.30	43.92	Nieto & Sons
	6/10/2014	77.48	37.85	32.98	4.87	43.53	Nieto & Sons
	7/3/2014	77.48	39.60	33.04	6.56	43.13	Nieto & Sons
	7/8/2014	77.48	38.67	32.89	5.78	43.43	Blaine Tech
	7/18/2014	77.48	38.64	32.86	5.78	43.46	Blaine Tech
	7/24/2014	77.48	38.27	32.82	5.45	43.57	Blaine Tech
	8/1/2014	77.48	37.00	32.55	4.45	44.04	Blaine Tech
	8/8/2014	77.48	36.97	32.51	4.46	44.08	Blaine Tech
	8/13/2014	77.48	36.82	32.54	4.28	44.08	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	8/19/2014	77.48	36.92	32.55	4.37	44.06	Blaine Tech
	8/29/2014	77.48	36.92	32.51	4.41	44.09	Blaine Tech
	9/5/2014	77.48	36.97	32.55	4.42	44.05	Blaine Tech
	9/11/2014	77.48	37.99	32.57	5.42	43.83	Blaine Tech
	9/18/2014	77.48	36.89	32.60	4.29	44.02	Blaine Tech
	9/26/2014	77.48	36.86	32.58	4.28	44.04	Blaine Tech
	10/1/2014	77.48	36.64	32.61	4.03	44.06	Blaine Tech
	10/6/2014	77.48	36.93	32.92	4.01	43.76	Blaine Tech
	10/14/2014	77.48	36.92	32.88	4.04	43.79	Blaine Tech
	10/23/2014	77.48	37.00	32.90	4.10	43.76	Blaine Tech
	10/27/2014	77.48	36.82	32.91	3.91	43.79	Blaine Tech
	11/3/2014	77.48	37.01	32.99	4.02	43.69	Blaine Tech
	11/10/2014	77.48	37.33	33.95	3.38	42.85	Blaine Tech
	11/18/2014	77.48	36.96	33.01	3.95	43.68	Blaine Tech
	11/25/2014	77.48	36.91	33.55	3.36	43.26	Blaine Tech
	12/3/2014	77.48	36.87	32.99	3.88	43.71	Blaine Tech
	12/12/2014	77.48	37.36	33.25	4.11	43.41	Blaine Tech
	12/19/2014	77.48	37.75	33.31	4.44	43.28	Blaine Tech
	3/10/2015	77.48	36.25	---	---	41.23	Kinder Morgan
	4/20/2015	77.48	36.29	33.82	2.47	43.17	Blaine Tech
	7/24/2015	77.48	39.80	33.70	6.10	42.56	Blaine Tech
	10/20/2015	77.48	35.44	---	---	42.04	Kinder Morgan
	3/16/2016	77.48	38.83	---	---	38.65	Kinder Morgan
	4/11/2016	77.48	37.10	---	---	40.38	Blaine Tech
	6/29/2016	77.48	38.20	---	---	39.28	Blaine Tech
GMW-25	4/30/2007	74.29	26.60	---	---	47.69	Secor
	11/12/2007	74.29	27.30	27.25	0.05	47.03	Stantec
	8/12/2008	74.29	27.81	---	---	46.48	Envent
	10/17/2008	74.29	28.26	---	---	46.03	Envent
	12/18/2008	74.29	29.01	---	---	45.28	Envent
	1/15/2009	74.29	28.62	---	---	45.67	Envent
	3/24/2009	74.29	28.79	---	---	45.50	Envent
	4/21/2009	74.29	28.35	---	---	45.94	Envent
	7/21/2009	74.29	29.80	---	---	44.49	Envent
	10/19/2009	74.29	30.28	---	---	44.01	Blaine Tech
	6/22/2010	74.29	31.64	---	---	42.65	Blaine Tech
	10/4/2010	74.29	29.25	---	---	45.04	Blaine Tech
	4/11/2011	74.29	26.21	---	---	48.08	Blaine Tech
	10/10/2011	74.29	30.02	---	---	44.27	Blaine Tech
	4/16/2012	74.29	31.30	---	---	42.99	Blaine Tech
	7/9/2012	---	NM	---	---	NC	Blaine Tech
	10/15/2012	78.14	31.88	---	---	46.26	Blaine Tech
	4/8/2013	78.14	32.11	---	---	46.03	Blaine Tech
	10/7/2013	78.14	33.23	33.10	0.13	45.01	Blaine Tech
	4/14/2014	78.14	37.40	33.00	4.40	44.13	Blaine Tech
	5/5/2014	78.14	37.51	33.06	4.45	44.06	Nieto & Sons
	5/12/2014	78.14	34.97	33.73	1.24	44.12	Nieto & Sons
	5/20/2014	78.14	36.75	34.30	2.45	43.28	Nieto & Sons
	5/27/2014	78.14	34.64	34.44	0.20	43.65	Nieto & Sons
	6/4/2014	78.14	35.00	---	---	43.14	Nieto & Sons
	6/10/2014	78.14	36.67	34.18	2.49	43.39	Nieto & Sons
	7/3/2014	78.14	34.21	---	---	43.93	Nieto & Sons
	7/24/2014	78.14	34.29	---	---	43.85	Blaine Tech
	8/1/2014	78.14	35.02	33.99	1.03	43.91	Blaine Tech
	8/8/2014	78.14	34.54	34.06	0.48	43.97	Blaine Tech
	8/14/2014	78.14	34.48	34.06	0.42	43.98	Blaine Tech
	8/19/2014	78.14	34.51	34.07	0.44	43.97	Blaine Tech
	8/29/2014	78.14	34.65	33.96	0.69	44.02	Blaine Tech
	9/18/2014	78.14	35.21	34.01	1.20	43.85	Blaine Tech
	9/26/2014	78.14	34.87	34.06	0.81	43.89	Blaine Tech
	10/1/2014	78.14	34.92	33.98	0.94	43.94	Blaine Tech
	10/6/2014	78.14	34.93	33.99	0.94	43.93	Blaine Tech
	10/14/2014	78.14	35.10	33.91	1.19	43.96	Blaine Tech
	10/23/2014	78.14	35.34	33.91	1.43	43.90	Blaine Tech
	10/27/2014	78.14	34.78	33.95	0.83	44.00	Blaine Tech
	11/3/2014	78.14	34.92	33.98	0.94	43.94	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	11/10/2014	78.14	35.12	34.02	1.10	43.87	Blaine Tech
	11/18/2014	78.14	34.90	34.11	0.79	43.85	Blaine Tech
	11/25/2014	78.14	35.07	34.07	1.00	43.84	Blaine Tech
	12/3/2014	78.14	35.10	33.98	1.12	43.90	Blaine Tech
	12/12/2014	78.14	35.22	34.30	0.92	43.63	Blaine Tech
	12/19/2014	78.14	35.05	34.50	0.55	43.51	Blaine Tech
	4/20/2015	78.14	35.19	34.47	0.72	43.50	Blaine Tech
	6/25/2015	78.14	36.35	35.40	0.95	42.52	Blaine Tech
	10/20/2015	78.14	35.40	35.38	0.02	42.76	Kinder Morgan
	3/16/2016	78.14	38.99	---	---	39.15	Kinder Morgan
	4/12/2016	78.14	37.15	---	---	40.99	Kinder Morgan
	6/29/2016	78.14	38.40	---	---	39.74	Blaine Tech
GMW-36	3/12/2007	74.53	24.29	---	---	50.24	Secor
	4/30/2007	74.53	24.40	---	---	50.13	Secor
	8/28/2007	74.53	24.31	---	---	50.22	Stantec
	11/12/2007	74.53	24.86	24.85	0.01	49.68	Stantec
	2/19/2008	74.53	25.50	---	---	49.03	Stantec
	4/14/2008	74.53	24.61	---	---	49.92	Stantec
	8/8/2008	74.53	26.20	26.14	0.06	48.38	Envent
	10/16/2008	74.77	26.11	26.09	0.02	48.68	Envent
	12/18/2008	74.53	28.70	28.65	0.05	45.87	Envent
	1/15/2009	74.53	27.73	27.45	0.28	47.02	Envent
	2/20/2009	74.53	26.39	26.35	0.04	48.17	Envent
	2/23/2009	74.53	26.13	25.80	0.33	48.66	Blaine Tech
	3/24/2009	74.53	29.83	---	---	44.70	Envent
	4/20/2009	74.53	25.63	25.59	0.04	48.93	Blaine Tech
	7/17/2009	74.53	27.40	---	---	47.13	Envent
	7/20/2009	74.53	25.90	---	---	48.63	Blaine Tech
	7/21/2009	74.53	26.03	---	---	48.50	Envent
	7/22/2009	74.53	25.90	---	---	48.63	Blaine Tech
	10/19/2009	74.53	26.56	26.45	0.11	48.06	Blaine Tech
	2/4/2010	74.53	26.93	26.80	0.13	47.70	Kinder Morgan
	3/15/2010	74.53	26.80	---	---	47.73	Blaine Tech
	4/16/2010	74.53	26.90	---	---	47.63	Blaine Tech
	5/24/2010	74.53	25.96	25.90	0.06	48.62	Blaine Tech
	5/28/2010	74.53	25.94	25.88	0.06	48.64	Blaine Tech
	6/22/2010	74.53	25.94	25.91	0.03	48.61	Blaine Tech
	7/12/2010	74.53	NM	---	---	NC	
	8/12/2010	74.53	NM	---	---	NC	
	9/20/2010	74.53	NM	---	---	NC	
	10/4/2010	74.53	26.90	---	---	47.63	
	10/24/2010	74.53	26.90	---	---	47.63	Blaine Tech
	11/23/2010	74.53	27.35	27.10	0.25	47.38	Blaine Tech
	12/22/2010	74.53	28.35	26.84	1.51	47.39	Blaine Tech
	1/10/2011	74.53	29.10	27.70	1.40	46.55	Blaine Tech
	2/24/2011	74.53	NM	---	---	NC	Blaine Tech
	3/23/2011	74.53	NM	---	---	NC	Blaine Tech
	4/12/2011	74.53	26.98	25.05	1.93	49.09	Blaine Tech
	5/13/2011	74.53	NM	---	---	NC	Blaine Tech
	6/22/2011	74.53	NM	---	---	NC	
	7/11/2011	74.53	NM	---	---	NC	
	8/19/2011	74.53	NM	---	---	NC	
	9/22/2011	74.53	NM	---	---	NC	
	10/10/2011	74.53	25.96	---	---	48.57	Blaine Tech
	11/28/2011	74.53	NM	---	---	NC	
	12/2/2011	74.53	26.71	---	---	47.82	Kinder Morgan
	12/21/2011	74.53	28.17	---	---	46.36	Blaine Tech
	1/9/2012	74.53	27.26	---	---	47.27	Blaine Tech
	2/23/2012	74.53	27.85	---	---	46.68	Blaine Tech
	3/28/2012	74.53	NM	---	---	NC	Blaine Tech
	4/16/2012	74.53	27.34	---	---	47.19	Blaine Tech
	5/25/2012	74.53	NM	---	---	NC	Blaine Tech
	6/15/2012	---	33.27	---	---	NC	Blaine Tech
	7/9/2012	---	33.71	---	---	NC	Blaine Tech
	8/29/2012	---	NM	---	---	NC	Blaine Tech
	9/26/2012	---	NM	---	---	NC	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	10/15/2012	76.66	32.11	---	---	44.55	Blaine Tech
	11/29/2012	76.66	33.93	31.68	2.25	44.53	Blaine Tech
	12/26/2012	76.66	34.86	30.36	4.50	45.40	Blaine Tech
	1/14/2013	76.66	34.12	30.42	3.70	45.50	Blaine Tech
	2/20/2013	76.66	NM	---	---	NC	Blaine Tech
	4/10/2013	76.66	32.42	29.75	2.67	46.38	Blaine Tech
	10/7/2013	76.66	34.65	30.72	3.93	45.15	Blaine Tech
	4/25/2014	76.66	34.71	31.12	3.59	44.82	Blaine Tech
	5/20/2014	76.66	34.95	31.50	3.45	44.47	Nieto & Sons
	5/27/2014	76.66	34.53	31.29	3.24	44.72	Nieto & Sons
	6/4/2014	76.66	34.93	31.50	3.43	44.47	Nieto & Sons
	8/13/2014	76.66	34.86	31.27	3.59	44.67	Blaine Tech
	8/19/2014	76.66	34.20	31.39	2.81	44.71	Blaine Tech
	8/29/2014	76.66	34.31	31.32	2.99	44.74	Blaine Tech
	9/5/2014	76.66	34.35	31.37	2.98	44.69	Blaine Tech
	9/11/2014	76.66	35.00	31.23	3.77	44.68	Blaine Tech
	9/18/2014	76.66	34.42	31.50	2.92	44.58	Blaine Tech
	9/26/2014	76.66	34.15	31.48	2.67	44.65	Blaine Tech
	10/1/2014	76.66	33.51	31.61	1.90	44.67	Blaine Tech
	10/6/2014	76.66	33.29	31.63	1.66	44.70	Blaine Tech
	10/14/2014	76.66	33.48	31.55	1.93	44.72	Blaine Tech
	10/23/2014	76.66	33.64	31.57	2.07	44.68	Blaine Tech
	10/27/2014	76.66	33.02	31.79	1.23	44.62	Blaine Tech
	11/3/2014	76.66	33.75	31.57	2.18	44.65	Blaine Tech
	11/18/2014	76.66	33.17	31.75	1.42	44.63	Blaine Tech
	11/25/2014	76.66	33.13	31.86	1.27	44.55	Blaine Tech
	12/3/2014	76.66	32.93	31.75	1.18	44.67	Blaine Tech
	4/20/2015	76.66	33.64	32.20	1.44	44.17	Blaine Tech
	10/21/2015	76.66	33.55	33.16	0.39	43.42	Blaine Tech
	4/12/2016	76.66	34.30	34.03	0.27	42.58	Kinder Morgan
GMW-O-11	4/30/2007	74.17	23.91	23.90	0.01	50.27	Secor
	11/12/2007	74.17	24.40	---	---	49.77	Stantec
	8/15/2008	74.17	29.30	---	---	44.87	Envent
	10/17/2008	74.17	24.45	---	---	49.72	Envent
	12/19/2008	74.17	24.85	---	---	49.32	Envent
	1/15/2009	74.17	26.87	24.38	2.49	49.29	Envent
	2/24/2009	74.17	24.31	24.21	0.10	49.94	Envent
	3/27/2009	74.17	31.08	---	---	43.09	Envent
	4/21/2009	74.17	25.36	25.34	0.02	48.83	Envent
	7/21/2009	74.17	26.18	---	---	47.99	Envent
	10/19/2009	74.17	NM	---	---	NC	Blaine Tech
	11/6/2009	74.17	26.33	26.18	0.15	47.96	Kinder Morgan
	10/4/2010	74.17	30.00	---	---	44.17	Blaine Tech
	4/13/2011	74.17	24.19	---	---	49.98	Blaine Tech
	10/10/2011	74.17	24.38	---	---	49.79	Blaine Tech
	4/16/2012	74.17	NM	---	---	NC	Blaine Tech
	7/9/2012	74.17	NM	---	---	NC	Blaine Tech
	10/15/2012	74.17	28.12	---	---	46.05	Blaine Tech
	4/8/2013	74.17	NM	---	---	NC	Blaine Tech
	9/24/2013	74.17	31.25	28.15	3.10	45.40	Blaine Tech
	10/7/2013	74.17	31.19	27.69	3.50	45.78	Blaine Tech
	4/25/2014	74.17	28.96	28.62	0.34	45.48	Blaine Tech
	9/5/2014	74.17	31.13	27.89	3.24	45.63	Blaine Tech
	9/11/2014	74.17	31.12	27.85	3.27	45.67	Blaine Tech
	9/18/2014	74.17	31.22	27.85	3.37	45.65	Blaine Tech
	9/26/2014	74.17	31.34	27.91	3.43	45.57	Blaine Tech
	10/1/2014	74.17	31.19	27.84	3.35	45.66	Blaine Tech
	10/6/2014	74.17	32.19	27.84	4.35	45.46	Blaine Tech
	10/14/2014	74.17	31.18	28.85	2.33	44.85	Blaine Tech
	10/23/2014	74.17	31.34	27.85	3.49	45.62	Blaine Tech
	10/27/2014	74.17	31.28	28.89	2.39	44.80	Blaine Tech
	11/3/2014	74.17	32.34	27.83	4.51	45.44	Blaine Tech
	11/10/2014	74.17	31.46	27.97	3.49	45.50	Blaine Tech
	11/18/2014	74.17	31.41	27.88	3.53	45.58	Blaine Tech
	11/25/2014	74.17	31.48	27.87	3.61	45.58	Blaine Tech
	12/3/2014	74.17	33.34	29.95	3.39	43.54	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	12/12/2014	74.17	33.25	29.08	4.17	44.26	Blaine Tech
	12/19/2014	74.17	32.52	28.09	4.43	45.19	Blaine Tech
	4/22/2015	74.17	31.54	28.10	3.44	45.38	Blaine Tech
	10/22/2015	74.17	33.08	29.23	3.85	44.17	Kinder Morgan
	3/16/2016	74.17	33.39	33.16	0.23	40.96	Kinder Morgan
	4/12/2016	74.17	33.33	33.12	0.21	41.01	Kinder Morgan
	6/30/2016	74.17	31.50	---	---	42.67	Kinder Morgan
GMW-O-12	4/30/2007	73.49	22.81	---	---	50.68	Secor
	11/12/2007	73.49	23.13	---	---	50.36	Stantec
	4/14/2008	73.49	23.36	---	---	50.13	Stantec
	10/13/2008	73.49	24.20	---	---	49.29	Stantec
	4/20/2009	73.49	24.21	---	---	49.28	Blaine Tech
	10/19/2009	73.49	25.08	---	---	48.41	Blaine Tech
	5/24/2010	73.49	24.80	---	---	48.69	Blaine Tech
	5/28/2010	73.49	24.74	---	---	48.75	Blaine Tech
	10/4/2010	73.49	25.31	25.20	0.11	48.27	Blaine Tech
	1/10/2011	73.49	26.42	26.32	0.10	47.15	Blaine Tech
	4/11/2011	73.49	24.04	---	---	49.45	Blaine Tech
	7/11/2011	73.49	NM	---	---	NC	
	10/10/2011	73.49	24.68	---	---	48.81	Blaine Tech
	1/9/2012	73.49	25.12	---	---	48.37	Blaine Tech
	4/16/2012	73.49	25.40	---	---	48.09	Blaine Tech
	7/9/2012	73.49	26.96	---	---	46.53	Blaine Tech
	10/15/2012	73.49	25.48	25.44	0.04	48.04	Blaine Tech
	1/14/2013	73.49	25.62	25.58	0.04	47.90	Blaine Tech
	4/8/2013	73.49	26.60	26.51	0.09	46.96	Blaine Tech
	9/24/2013	73.49	27.90	27.74	0.16	45.72	Blaine Tech
	10/7/2013	73.49	27.34	27.28	0.06	46.20	Blaine Tech
	4/14/2014	73.49	30.34	26.80	3.54	45.96	Blaine Tech
	5/6/2014	73.49	30.93	26.74	4.19	45.89	Nieto & Sons
	5/12/2014	73.49	30.81	26.82	3.99	45.85	Nieto & Sons
	5/20/2014	73.49	31.78	27.32	4.46	45.26	Nieto & Sons
	5/27/2014	73.49	33.04	26.78	6.26	45.43	Nieto & Sons
	6/4/2014	73.49	33.00	27.75	5.25	44.66	Nieto & Sons
	6/10/2014	73.49	34.53	26.81	7.72	45.10	Nieto & Sons
	7/3/2014	73.49	34.27	26.94	7.33	45.05	Blaine Tech
	7/8/2014	73.49	33.87	26.87	7.00	45.19	Blaine Tech
	7/18/2014	73.49	33.36	27.07	6.29	45.13	Blaine Tech
	7/24/2014	73.49	33.00	26.98	6.02	45.28	Blaine Tech
	8/1/2014	73.49	31.80	26.83	4.97	45.64	Blaine Tech
	8/8/2014	73.49	31.26	26.91	4.35	45.69	Blaine Tech
	8/13/2014	73.49	31.18	26.88	4.30	45.73	Blaine Tech
	8/19/2014	73.49	31.01	26.86	4.15	45.78	Blaine Tech
	8/29/2014	73.49	31.03	26.89	4.14	45.75	Blaine Tech
	9/5/2014	73.49	31.19	26.88	4.31	45.73	Blaine Tech
	9/18/2014	73.49	31.30	26.82	4.48	45.75	Blaine Tech
	9/26/2014	73.49	31.33	26.89	4.44	45.69	Blaine Tech
	10/1/2014	73.49	31.21	26.85	4.36	45.75	Blaine Tech
	10/6/2014	73.49	31.20	29.84	1.36	43.37	Blaine Tech
	10/14/2014	73.49	31.14	26.86	4.28	45.75	Blaine Tech
	10/23/2014	73.49	31.30	26.85	4.45	45.73	Blaine Tech
	10/27/2014	73.49	31.28	26.90	4.38	45.69	Blaine Tech
	11/3/2014	73.49	32.30	26.84	5.46	45.53	Blaine Tech
	11/10/2014	73.49	31.45	26.91	4.54	45.65	Blaine Tech
	11/18/2014	73.49	32.34	26.90	5.44	45.47	Blaine Tech
	11/25/2014	73.49	31.57	27.87	3.70	44.86	Blaine Tech
	12/3/2014	73.49	33.87	28.81	5.06	43.64	Blaine Tech
	12/19/2014	73.49	32.78	26.97	5.81	45.33	Blaine Tech
	4/20/2015	73.49	33.35	26.91	6.44	45.26	Blaine Tech
	4/22/2015	73.49	33.35	26.91	6.44	45.26	Blaine Tech
	5/21/2015	73.49	34.31	27.35	6.96	44.71	Northstar
	5/29/2015	73.49	34.15	27.24	6.91	44.83	Northstar
	6/2/2015	73.49	34.00	27.27	6.73	44.84	Northstar
	6/5/2015	73.49	34.00	27.50	6.50	44.66	Northstar
	6/12/2015	73.49	33.96	27.35	6.61	44.78	Northstar
	6/19/2015	73.49	33.98	27.58	6.40	44.60	Northstar

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	6/26/2015	73.49	33.97	28.15	5.82	44.15	Northstar
	7/2/2015	73.49	33.83	28.20	5.63	44.14	Northstar
	7/7/2015	73.49	33.60	27.93	5.67	44.40	Northstar
	7/17/2015	73.49	33.57	27.85	5.72	44.47	Northstar
	7/24/2015	73.49	33.15	28.25	4.90	44.24	Northstar
	7/29/2015	73.49	33.02	28.10	4.92	44.38	Northstar
	8/11/2015	73.49	33.00	28.90	4.10	43.75	Northstar
	8/18/2015	73.49	32.65	28.23	4.42	44.35	Northstar
	8/28/2015	73.49	32.41	28.17	4.24	44.45	Kinder Morgan
	9/1/2015	73.49	33.18	28.65	4.53	43.91	Kinder Morgan
	9/25/2015	73.49	34.69	28.03	6.66	44.09	Kinder Morgan
	10/16/2015	73.49	34.63	27.83	6.80	44.27	Kinder Morgan
	10/19/2015	73.49	34.65	27.82	6.83	44.27	Blaine Tech
	10/30/2015	73.49	39.38	28.11	11.27	43.07	Kinder Morgan
	3/14/2016	73.49	32.40	31.60	0.80	41.73	Blaine Tech
	4/11/2016	73.49	33.35	26.86	6.49	45.30	Blaine Tech
	6/29/2016	73.49	33.90	33.10	0.80	40.23	Blaine Tech
GMW-O-15	4/30/2007	74.23	23.41	23.30	0.11	50.91	Secor
	11/12/2007	74.23	23.95	23.85	0.10	50.36	Stantec
	4/14/2008	74.23	23.64	---	---	50.59	Stantec
	8/8/2008	74.23	24.60	---	---	49.63	Envent
	8/11/2008	74.23	24.40	24.34	0.06	49.88	Stantec
	10/16/2008	74.23	24.53	---	---	49.70	Envent
	12/18/2008	74.23	24.86	---	---	49.37	Envent
	1/2/2009	74.23	24.82	---	---	49.41	Envent
	1/15/2009	74.23	26.01	---	---	48.22	Envent
	2/20/2009	74.23	24.80	---	---	49.43	Envent
	2/23/2009	74.23	24.76	24.74	0.02	49.49	Blaine Tech
	3/24/2009	74.23	25.55	---	---	48.68	Envent
	4/20/2009	74.23	24.66	24.61	0.05	49.61	Blaine Tech
	7/17/2009	74.23	25.01	---	---	49.22	Envent
	7/20/2009	74.23	24.99	24.94	0.05	49.28	Blaine Tech
	7/22/2009	74.23	24.99	24.94	0.05	49.28	Blaine Tech
	10/19/2009	74.23	25.55	25.43	0.12	48.78	Blaine Tech
	2/4/2010	74.23	25.50	25.48	0.02	48.75	Kinder Morgan
	3/15/2010	74.23	NM	---	---	NC	
	4/16/2010	74.23	23.10	---	---	51.13	Blaine Tech
	5/24/2010	74.23	25.67	---	---	48.56	Blaine Tech
	5/28/2010	74.23	25.35	---	---	48.88	Blaine Tech
	6/22/2010	74.23	25.81	---	---	48.42	Blaine Tech
	7/12/2010	74.23	NM	---	---	NC	
	8/12/2010	74.23	NM	---	---	NC	
	9/20/2010	74.23	NM	---	---	NC	
	10/4/2010	74.23	25.85	25.80	0.05	48.42	Blaine Tech
	11/23/2010	74.23	NM	---	---	NC	Blaine Tech
	12/22/2010	74.23	26.31	---	---	47.92	Blaine Tech
	1/10/2011	74.23	25.97	---	---	48.26	Blaine Tech
	2/24/2011	74.23	NM	---	---	NC	Blaine Tech
	3/23/2011	74.23	NM	---	---	NC	Blaine Tech
	4/12/2011	74.23	22.55	22.53	0.02	51.70	Blaine Tech
	5/13/2011	74.23	NM	---	---	NC	Blaine Tech
	6/22/2011	74.23	NM	---	---	NC	
	7/11/2011	74.23	NM	---	---	NC	
	8/19/2011	74.23	NM	---	---	NC	
	9/22/2011	74.23	NM	---	---	NC	
	10/10/2011	74.23	23.79	23.22	0.57	50.90	Blaine Tech
	11/28/2011	74.23	NM	---	---	NC	
	12/2/2011	74.23	23.92	23.86	0.06	50.36	Kinder Morgan
	12/21/2011	74.23	31.13	---	---	43.10	Blaine Tech
	1/9/2012	74.23	27.67	---	---	46.56	Blaine Tech
	2/23/2012	74.23	31.82	---	---	42.41	Blaine Tech
	3/28/2012	74.23	30.30	---	---	43.93	Blaine Tech
	4/16/2012	74.23	26.56	26.51	0.05	47.71	Blaine Tech
	5/25/2012	74.23	26.64	---	---	47.59	Blaine Tech
	6/15/2012	74.23	26.93	---	---	47.30	Blaine Tech
	7/9/2012	74.23	25.47	---	---	48.76	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	8/29/2012	74.23	NM	---	---	NC	Blaine Tech
	9/26/2012	74.23	30.64	---	---	43.59	Blaine Tech
	10/15/2012	74.23	31.82	---	---	42.41	Blaine Tech
	11/29/2012	74.23	NM	---	---	NC	Blaine Tech
	12/26/2012	74.23	27.41	---	---	46.82	Blaine Tech
	1/14/2013	74.23	27.62	---	---	46.61	Blaine Tech
	2/20/2013	74.23	NM	---	---	NC	Blaine Tech
	4/10/2013	74.23	NM	---	---	NC	Blaine Tech
	4/26/2013	74.23	27.90	---	---	46.33	Kinder Morgan
	10/7/2013	74.23	29.03	28.26	0.77	45.82	Blaine Tech
	4/18/2014	74.23	28.40	28.08	0.32	46.09	Blaine Tech
	8/14/2014	74.23	32.59	28.26	4.33	45.10	Blaine Tech
	8/19/2014	74.23	32.34	28.23	4.11	45.18	Blaine Tech
	8/29/2014	74.23	31.84	28.25	3.59	45.26	Blaine Tech
	9/5/2014	74.23	31.91	28.29	3.62	45.22	Blaine Tech
	9/11/2014	74.23	32.16	28.79	3.37	44.77	Blaine Tech
	9/18/2014	74.23	32.50	28.23	4.27	45.15	Blaine Tech
	9/26/2014	74.23	32.20	28.27	3.93	45.17	Blaine Tech
	10/1/2014	74.23	31.93	28.28	3.65	45.22	Blaine Tech
	10/6/2014	74.23	31.91	28.27	3.64	45.23	Blaine Tech
	10/14/2014	74.23	31.85	28.29	3.56	45.23	Blaine Tech
	10/23/2014	74.23	32.10	28.30	3.80	45.17	Blaine Tech
	10/27/2014	74.23	31.89	28.30	3.59	45.21	Blaine Tech
	11/18/2014	74.23	31.86	28.39	3.47	45.15	Blaine Tech
	11/25/2014	74.23	32.36	28.35	4.01	45.08	Blaine Tech
	12/3/2014	74.23	31.73	28.36	3.37	45.20	Blaine Tech
	12/12/2014	74.23	32.61	28.54	4.07	44.88	Blaine Tech
	12/19/2014	74.23	32.62	28.37	4.25	45.01	Blaine Tech
	4/20/2015	74.23	31.93	28.82	3.11	44.79	Blaine Tech
	10/19/2015	74.23	31.91	28.89	3.02	44.74	Blaine Tech
	4/12/2016	74.23	29.78	---	---	44.45	Kinder Morgan
GMW-O-18	4/30/2007	74.36	24.21	---	---	50.15	Secor
	11/12/2007	74.36	22.46	---	---	51.90	Secor
	4/14/2008	74.36	24.50	---	---	49.86	Secor
	10/13/2008	74.36	25.46	---	---	48.90	Stantec
	4/20/2009	74.36	25.59	---	---	48.77	Blaine Tech
	10/19/2009	74.36	26.31	---	---	48.05	Blaine Tech
	3/15/2010	74.36	26.54	---	---	47.82	Blaine Tech
	4/16/2010	74.36	24.25	---	---	50.11	Blaine Tech
	5/24/2010	74.36	26.26	---	---	48.10	Blaine Tech
	5/28/2010	74.36	26.03	---	---	48.33	Blaine Tech
	6/22/2010	74.36	26.41	---	---	47.95	Blaine Tech
	7/12/2010	74.36	NM	---	---	NC	
	8/12/2010	74.36	NM	---	---	NC	
	9/20/2010	74.36	NM	---	---	NC	
	10/4/2010	74.36	29.95	---	---	44.41	Blaine Tech
	11/16/2010	74.36	NM	---	---	NC	
	12/22/2010	74.36	NM	---	---	NC	
	1/10/2011	74.36	NM	---	---	NC	
	2/24/2011	74.36	NM	---	---	NC	Blaine Tech
	3/23/2011	74.36	NM	---	---	NC	Blaine Tech
	4/12/2011	74.36	NM	---	---	NC	Blaine Tech
	5/13/2011	74.36	NM	---	---	NC	Blaine Tech
	6/22/2011	74.36	NM	---	---	NC	
	7/11/2011	74.36	NM	---	---	NC	
	8/19/2011	74.36	NM	---	---	NC	
	9/22/2011	74.36	NM	---	---	NC	
	10/10/2011	74.36	23.68	---	---	50.68	Blaine Tech
	11/28/2011	74.36	NM	---	---	NC	
	12/2/2011	74.36	24.22	---	---	50.14	Blaine Tech
	12/21/2011	74.36	27.14	---	---	47.22	Blaine Tech
	2/23/2012	74.36	31.18	---	---	43.18	Blaine Tech
	3/28/2012	74.36	NM	---	---	NC	Blaine Tech
	4/16/2012	74.36	27.10	---	---	47.26	Blaine Tech
	5/25/2012	74.36	27.31	---	---	47.05	Blaine Tech
	6/15/2012	74.36	35.13	---	---	39.23	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	7/9/2012	74.36	29.51	---	---	44.85	Blaine Tech
	8/29/2012	74.36	NM	---	---	NC	Blaine Tech
	9/26/2012	74.36	30.83	---	---	43.53	Blaine Tech
	10/15/2012	74.36	29.73	---	---	44.63	Blaine Tech
	11/29/2012	74.36	NM	---	---	NC	Blaine Tech
	12/26/2012	74.36	28.87	---	---	45.49	Blaine Tech
	1/14/2013	74.36	28.92	---	---	45.44	Blaine Tech
	2/20/2013	74.36	NM	---	---	NC	Blaine Tech
	4/10/2013	74.36	28.10	---	---	46.26	Blaine Tech
	10/7/2013	74.36	26.67	---	---	47.69	Blaine Tech
	4/18/2014	74.36	29.43	29.37	0.06	44.98	Blaine Tech
	8/14/2014	74.36	29.87	29.45	0.42	44.83	Blaine Tech
	8/19/2014	74.36	29.97	29.58	0.39	44.70	Blaine Tech
	8/29/2014	74.36	29.77	29.34	0.43	44.93	Blaine Tech
	9/11/2014	74.36	29.96	29.61	0.35	44.68	Blaine Tech
	9/18/2014	74.36	29.95	29.56	0.39	44.72	Blaine Tech
	9/26/2014	74.36	29.97	29.55	0.42	44.73	Blaine Tech
	10/1/2014	74.36	29.90	29.52	0.38	44.76	Blaine Tech
	10/6/2014	74.36	29.94	29.56	0.38	44.72	Blaine Tech
	10/14/2014	74.36	29.94	29.58	0.36	44.71	Blaine Tech
	10/23/2014	74.36	30.00	29.62	0.38	44.66	Blaine Tech
	10/27/2014	74.36	29.95	29.52	0.43	44.75	Blaine Tech
	4/20/2015	74.36	28.53	---	---	45.83	Blaine Tech
	10/19/2015	74.36	30.90	---	---	43.46	Blaine Tech
	4/12/2016	74.36	31.63	---	---	42.73	Blaine Tech
GMW-O-20	8/15/2008	73.32	25.90	---	---	47.42	Envent
	10/17/2008	73.32	25.82	---	---	47.50	Envent
	12/19/2008	73.32	27.15	---	---	46.17	Envent
	1/15/2009	73.32	26.53	26.09	0.44	47.15	Envent
	2/24/2009	73.32	27.85	---	---	45.47	Envent
	3/20/2009	73.32	28.81	---	---	44.51	Envent
	3/27/2009	73.32	27.84	---	---	45.48	Envent
	4/21/2009	73.32	28.70	---	---	44.62	Envent
	7/21/2009	73.32	24.10	---	---	49.22	Envent
	10/19/2009	73.32	NM	---	---	NC	Blaine Tech
	11/9/2009	73.32	25.60	25.40	0.20	47.88	Kinder Morgan
	6/22/2010	73.32	24.76	24.66	0.10	48.64	Blaine Tech
	10/4/2010	73.32	31.20	31.10	0.10	42.20	Blaine Tech
	1/10/2011	73.32	26.62	26.48	0.14	46.81	Blaine Tech
	4/11/2011	73.32	23.82	---	---	49.50	Blaine Tech
	7/11/2011	73.32	NM	---	---	NC	
	10/10/2011	73.32	24.05	---	---	49.27	Blaine Tech
	1/9/2012	73.32	24.68	---	---	48.64	Blaine Tech
	4/16/2012	73.32	26.18	---	---	47.14	Blaine Tech
	7/9/2012	73.32	32.92	---	---	40.40	Blaine Tech
	10/15/2012	73.32	32.97	32.95	0.02	40.37	Blaine Tech
	1/14/2013	73.32	32.98	32.93	0.05	40.38	Blaine Tech
	4/8/2013	73.32	29.63	26.46	3.17	46.27	Blaine Tech
	9/24/2013	73.32	31.10	27.20	3.90	45.40	Blaine Tech
	10/7/2013	73.32	32.09	27.06	5.03	45.33	Blaine Tech
	4/25/2014	73.32	28.48	28.40	0.08	44.91	Blaine Tech
	9/18/2014	73.32	30.71	27.72	2.99	45.05	Blaine Tech
	9/26/2014	73.32	30.87	27.75	3.12	44.99	Blaine Tech
	10/1/2014	73.32	30.52	27.65	2.87	45.14	Blaine Tech
	10/6/2014	73.32	30.50	27.66	2.84	45.13	Blaine Tech
	10/14/2014	73.32	30.63	27.62	3.01	45.14	Blaine Tech
	10/23/2014	73.32	30.80	27.70	3.10	45.05	Blaine Tech
	10/27/2014	73.32	30.70	27.76	2.94	45.02	Blaine Tech
	11/3/2014	73.32	30.81	27.62	3.19	45.11	Blaine Tech
	11/10/2014	73.32	30.94	27.75	3.19	44.98	Blaine Tech
	11/18/2014	73.32	30.91	27.65	3.26	45.07	Blaine Tech
	11/25/2014	73.32	30.95	27.65	3.30	45.06	Blaine Tech
	12/3/2014	73.32	32.56	27.83	4.73	44.61	Blaine Tech
	12/19/2014	73.32	31.72	27.93	3.79	44.69	Blaine Tech
	4/22/2015	73.32	32.25	27.98	4.27	44.55	Blaine Tech
	10/22/2015	73.32	31.36	29.38	1.98	43.57	Kinder Morgan

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	3/16/2016	73.32	32.54	---	---	40.78	Kinder Morgan
	4/12/2016	73.32	32.48	---	---	40.84	Kinder Morgan
	6/29/2016	73.32	32.50	---	---	40.82	Blaine Tech
GMW-O-21	12/28/2007	71.43	27.67	---	---	43.76	Geomatrix
	8/15/2008	73.94	NM	---	---	NC	Envent
	10/17/2008	71.43	26.00	---	---	45.43	Envent
	12/19/2008	71.43	24.82	---	---	46.61	Envent
	3/27/2009	71.43	26.41	---	---	45.02	Envent
	7/21/2009	71.43	24.88	---	---	46.55	Envent
	10/19/2009	71.43	NM	---	---	NC	Blaine Tech
	11/9/2009	71.43	25.02	---	---	46.41	Kinder Morgan
	10/4/2010	71.43	25.40	---	---	46.03	Blaine Tech
	4/13/2011	71.43	23.72	---	---	47.71	Blaine Tech
	10/10/2011	71.43	24.65	---	---	46.78	Blaine Tech
	4/16/2012	71.43	NM	---	---	NC	Blaine Tech
	7/9/2012	71.43	NM	---	---	NC	Blaine Tech
	10/15/2012	71.43	32.50	---	---	38.93	Blaine Tech
	4/8/2013	71.43	NM	---	---	NC	Blaine Tech
	9/25/2013	71.43	29.25	---	---	42.18	Blaine Tech
	10/7/2013	71.43	NM	---	---	NC	Blaine Tech
	4/14/2014	71.43	28.65	28.61	0.04	42.81	Blaine Tech
	9/5/2014	71.43	29.61	28.78	0.83	42.48	Blaine Tech
	9/26/2014	71.43	29.85	28.77	1.08	42.44	Blaine Tech
	10/1/2014	71.43	29.79	28.64	1.15	42.56	Blaine Tech
	10/6/2014	71.43	29.40	28.72	0.68	42.57	Blaine Tech
	10/27/2014	71.43	29.75	28.93	0.82	42.34	Blaine Tech
	11/10/2014	71.43	29.98	28.95	1.03	42.27	Blaine Tech
	11/18/2014	71.43	30.05	28.92	1.13	42.28	Blaine Tech
	11/25/2014	71.43	29.73	28.85	0.88	42.40	Blaine Tech
	12/12/2014	71.43	30.61	29.02	1.59	42.09	Blaine Tech
	12/19/2014	71.43	30.62	29.04	1.58	42.07	Blaine Tech
	4/20/2015	71.43	30.15	28.99	1.16	42.21	Blaine Tech
	6/10/2015	71.43	31.00	30.70	0.30	40.67	Blaine Tech
7/2/2015	71.43	32.30	29.88	2.42	41.07	Northstar	
7/7/2015	71.43	30.65	30.06	0.59	41.25	Northstar	
7/17/2015	71.43	30.40	30.10	0.30	41.27	Northstar	
7/29/2015	71.43	30.40	30.10	0.30	41.27	Northstar	
8/11/2015	71.43	31.00	30.70	0.30	40.67	Northstar	
10/19/2015	71.43	31.43	31.20	0.23	40.18	Blaine Tech	
3/14/2016	71.43	33.20	33.17	0.03	38.25	Blaine Tech	
4/11/2016	71.43	32.17	31.84	0.33	39.52	Blaine Tech	
6/29/2016	71.43	33.03	32.83	0.20	38.56	Blaine Tech	
GMW-O-23	8/14/2007	73.63	23.33	---	---	50.30	Geomatrix
	8/21/2007	73.63	23.31	---	---	50.32	Geomatrix
	8/28/2007	73.63	23.00	---	---	50.63	Stantec
	9/11/2007	73.63	23.42	---	---	50.21	Geomatrix
	10/5/2007	73.63	27.79	---	---	45.84	Geomatrix
	11/2/2007	73.63	25.15	---	---	48.48	Geomatrix
	11/13/2007	73.63	23.90	---	---	49.73	Stantec
	12/28/2007	73.63	24.91	---	---	48.72	Geomatrix
	8/15/2008	73.63	26.28	---	---	47.35	Envent
	10/17/2008	73.63	27.16	---	---	46.47	Envent
	12/19/2008	73.63	27.60	---	---	46.03	Envent
	1/15/2009	73.63	27.54	---	---	46.09	Envent
	2/24/2009	73.63	26.19	---	---	47.44	Envent
	3/27/2009	73.63	23.74	---	---	49.89	Envent
	4/21/2009	73.63	27.30	---	---	46.33	Envent
	10/19/2009	73.63	NM	---	---	NC	Blaine Tech
	11/9/2009	73.63	27.50	---	---	46.13	Kinder Morgan
	6/22/2010	73.63	32.10	---	---	41.53	Blaine Tech
	10/4/2010	73.63	25.92	---	---	47.71	Blaine Tech
	1/10/2011	73.63	27.45	---	---	46.18	Blaine Tech
	4/11/2011	73.63	25.03	---	---	48.60	Blaine Tech
	7/11/2011	73.63	NM	---	---	NC	Blaine Tech
	10/10/2011	73.63	25.25	---	---	48.38	Blaine Tech
1/9/2012	73.63	25.91	---	---	47.72	Blaine Tech	

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	4/16/2012	73.63	27.38	---	---	46.25	Blaine Tech
	7/9/2012	73.63	27.41	---	---	46.22	Blaine Tech
	10/15/2012	73.63	26.48	---	---	47.15	Blaine Tech
	1/14/2013	73.63	29.35	---	---	44.28	Blaine Tech
	4/8/2013	73.63	29.81	27.74	2.07	45.48	Blaine Tech
	9/23/2013	73.63	29.90	---	---	43.73	Blaine Tech
	10/7/2013	73.63	32.86	28.30	4.56	44.42	Blaine Tech
	4/25/2014	73.63	29.81	29.66	0.15	43.94	Blaine Tech
	9/5/2014	73.63	32.57	28.76	3.81	44.11	Blaine Tech
	9/11/2014	73.63	32.94	28.63	4.31	44.14	Blaine Tech
	9/18/2014	73.63	32.80	28.65	4.15	44.15	Blaine Tech
	9/26/2014	73.63	32.87	28.70	4.17	44.10	Blaine Tech
	10/1/2014	73.63	32.56	28.75	3.81	44.12	Blaine Tech
	10/6/2014	73.63	32.50	28.73	3.77	44.15	Blaine Tech
	10/14/2014	73.63	32.75	28.20	4.55	44.52	Blaine Tech
	10/23/2014	73.63	32.80	28.69	4.11	44.12	Blaine Tech
	10/27/2014	73.63	32.51	28.80	3.71	44.09	Blaine Tech
	11/3/2014	73.63	32.82	29.68	3.14	43.32	Blaine Tech
	11/10/2014	73.63	32.80	28.78	4.02	44.05	Blaine Tech
	11/18/2014	73.63	32.78	29.78	3.00	43.25	Blaine Tech
	11/25/2014	73.63	32.64	28.78	3.86	44.08	Blaine Tech
	12/3/2014	73.63	33.25	28.94	4.31	43.83	Blaine Tech
	12/12/2014	73.63	32.58	29.33	3.25	43.65	Blaine Tech
	12/19/2014	73.63	32.71	29.37	3.34	43.59	Blaine Tech
	3/17/2015	73.63	30.40	30.00	0.40	43.55	Kinder Morgan
	4/22/2015	73.63	33.08	30.36	2.72	42.73	Blaine Tech
	10/22/2015	73.63	32.82	30.46	2.36	42.70	Kinder Morgan
	3/16/2016	73.63	34.43	---	---	39.20	Kinder Morgan
	4/12/2016	73.63	32.59	---	---	41.04	Kinder Morgan
	6/29/2016	73.63	33.90	---	---	39.73	Blaine Tech
GMW-SF-9	4/21/2009	73.00	24.19	---	---	48.81	Envent
	5/24/2010	73.00	28.31	---	---	44.69	Blaine Tech
	5/28/2010	73.00	28.37	---	---	44.63	Blaine Tech
	10/4/2010	73.00	25.28	---	---	47.72	Blaine Tech
	4/11/2011	73.00	23.90	---	---	49.10	Blaine Tech
	10/10/2011	73.00	24.70	---	---	48.30	Blaine Tech
	4/16/2012	73.00	26.99	---	---	46.01	Blaine Tech
	7/9/2012	73.00	NM	---	---	NC	Blaine Tech
	10/15/2012	73.05	34.21	---	---	38.84	Blaine Tech
	1/14/2013	73.05	34.32	---	---	38.73	Blaine Tech
	4/10/2013	73.05	27.37	---	---	45.68	Blaine Tech
	8/14/2014	73.05	29.35	28.37	0.98	44.48	Blaine Tech
	8/19/2014	73.05	28.46	28.44	0.02	44.61	Blaine Tech
	8/29/2014	73.05	29.32	28.31	1.01	44.54	Blaine Tech
	9/5/2014	73.05	29.33	28.29	1.04	44.55	Blaine Tech
	9/11/2014	73.05	29.49	28.47	1.02	44.38	Blaine Tech
	9/18/2014	73.05	28.95	28.91	0.04	44.13	Blaine Tech
	9/26/2014	73.05	28.93	28.59	0.34	44.39	Blaine Tech
	4/20/2015	73.05	29.01	---	---	44.04	Blaine Tech
	10/21/2015	73.05	29.69	---	---	43.36	Blaine Tech
GMW-SF-10	4/21/2009	75.77	27.10	---	---	48.67	Envent
	10/4/2010	75.77	28.03	---	---	47.74	Blaine Tech
	4/11/2011	75.77	26.80	---	---	48.97	Blaine Tech
	10/10/2011	75.77	27.60	---	---	48.17	Blaine Tech
	4/16/2012	75.77	28.81	---	---	46.96	Blaine Tech
	7/9/2012	75.77	NM	---	---	NC	Blaine Tech
	10/15/2012	75.77	29.88	---	---	45.89	Blaine Tech
	4/8/2013	75.77	DRY	---	---	NC	Blaine Tech
GWR-3	4/30/2007	74.93	27.97	---	---	46.96	Secor
	11/12/2007	74.93	27.90	---	---	47.03	Stantec
	10/17/2008	74.93	29.88	---	---	45.05	Envent
	12/17/2008	74.93	19.71	---	---	55.22	Envent
	1/15/2009	74.93	29.27	29.26	0.26	45.88	Envent
	3/27/2009	74.93	27.18	---	---	47.75	Envent
	4/21/2009	74.93	29.97	---	---	44.96	Envent
	7/21/2009	74.93	28.77	---	---	46.16	Envent

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	10/19/2009	74.93	NM	---	---	NC	Blaine Tech
	10/4/2010	74.93	30.67	---	---	44.26	Blaine Tech
	4/11/2011	74.93	29.94	---	---	44.99	Blaine Tech
	10/10/2011	74.93	29.22	---	---	45.71	Blaine Tech
	4/16/2012	74.93	29.56	---	---	45.37	Blaine Tech
	7/9/2012	---	NM	---	---	NC	Blaine Tech
	10/15/2012	77.6	31.21	---	---	46.39	Blaine Tech
	4/8/2013	77.6	29.21	29.18	0.03	48.41	Blaine Tech
	10/7/2013	77.6	36.20	31.67	4.53	45.16	Blaine Tech
	4/14/2014	77.6	38.80	32.23	6.57	44.25	Blaine Tech
	5/5/2014	77.6	38.81	32.31	6.50	44.18	Nieto & Sons
	5/12/2014	77.6	36.34	32.77	3.57	44.22	Nieto & Sons
	5/27/2014	77.6	36.11	33.20	2.91	43.91	Nieto & Sons
	6/4/2014	77.6	34.57	31.61	2.96	45.49	Nieto & Sons
	8/8/2014	77.6	37.92	33.38	4.54	43.45	Blaine Tech
	8/13/2014	77.6	35.38	33.18	2.20	44.05	Blaine Tech
	8/19/2014	77.6	35.28	33.25	2.03	44.00	Blaine Tech
	8/29/2014	77.6	35.72	33.12	2.60	44.04	Blaine Tech
	9/5/2014	77.6	35.68	33.19	2.49	43.99	Blaine Tech
	9/11/2014	77.6	36.05	33.04	3.01	44.05	Blaine Tech
	9/18/2014	77.60	35.34	33.27	2.07	43.98	Blaine Tech
	9/26/2014	77.60	35.25	33.24	2.01	44.02	Blaine Tech
	10/1/2014	77.60	36.44	34.01	2.43	43.18	Blaine Tech
	10/6/2014	77.60	34.71	33.33	1.38	44.04	Blaine Tech
	10/14/2014	77.60	35.15	33.20	1.95	44.07	Blaine Tech
	10/23/2014	77.60	35.36	33.20	2.16	44.03	Blaine Tech
	10/27/2014	77.60	34.68	33.49	1.19	43.91	Blaine Tech
	11/3/2014	77.60	35.43	33.18	2.25	44.04	Blaine Tech
	11/10/2014	77.60	35.02	33.32	1.70	43.99	Blaine Tech
	11/18/2014	77.60	35.05	33.34	1.71	43.97	Blaine Tech
	11/25/2014	77.60	35.04	33.36	1.68	43.95	Blaine Tech
	12/3/2014	77.60	34.95	33.34	1.61	43.99	Blaine Tech
	12/12/2014	77.60	35.11	33.64	1.47	43.71	Blaine Tech
	12/19/2014	77.60	35.55	33.67	1.88	43.61	Blaine Tech
	4/20/2015	77.60	37.25	33.34	3.91	43.60	Blaine Tech
	7/24/2015	77.60	41.30	33.95	7.35	42.40	Northstar
	8/12/2015	77.60	37.03	34.42	2.61	42.74	Northstar
	10/20/2015	77.60	35.98	34.65	1.33	42.72	Blaine Tech
	3/16/2016	77.60	38.60	---	---	39.00	Kinder Morgan
	4/11/2016	77.60	36.90	---	---	40.70	Blaine Tech
	6/29/2016	77.60	37.77	---	---	39.83	Blaine Tech
MW-18 (MID)	4/30/2007	75.67	29.77	---	---	45.90	Secor
	11/12/2007	75.67	30.23	---	---	45.44	Secor
	4/14/2008	75.67	30.45	---	---	45.22	Secor
	10/13/2008	75.67	31.15	---	---	44.52	Stantec
	4/20/2009	75.67	31.49	---	---	44.18	Blaine Tech
	10/19/2009	75.67	32.62	---	---	43.05	Blaine Tech
	5/24/2010	75.67	32.26	---	---	43.41	Blaine Tech
	5/28/2010	75.67	32.17	---	---	43.50	Blaine Tech
	10/4/2010	75.67	32.30	---	---	43.37	Blaine Tech
	4/11/2011	75.67	31.28	---	---	44.39	Blaine Tech
	10/10/2011	75.67	31.51	---	---	44.16	Blaine Tech
	4/16/2012	75.67	31.75	---	---	43.92	Blaine Tech
	7/9/2012	75.67	NM	---	---	NC	Blaine Tech
	10/15/2012	75.67	33.41	---	---	42.26	Blaine Tech
	4/8/2013	75.67	30.68	---	---	44.99	Blaine Tech
	10/7/2013	75.67	35.33	---	---	40.34	Blaine Tech
	4/14/2014	75.67	35.40	---	---	40.27	Blaine Tech
	10/27/2014	75.67	35.81	---	---	39.86	Blaine Tech
	4/20/2015	75.67	36.29	---	---	39.38	Blaine Tech
	10/19/2015	75.67	36.99	---	---	38.68	Blaine Tech
	3/14/2016	75.67	40.70	---	---	34.97	Blaine Tech
	4/11/2016	75.67	38.89	---	---	36.78	Blaine Tech
	6/29/2016	75.67	39.94	---	---	35.73	Blaine Tech
MW-O-1	4/30/2007	75.48	24.10	23.98	0.12	51.48	Secor
	8/14/2007	75.48	25.31	23.78	1.53	51.39	Geomatrix

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	8/21/2007	75.48	23.84	23.58	0.26	51.85	Geomatrix
	8/28/2007	75.48	23.07	23.06	0.01	52.42	Stantec
	9/11/2007	75.48	23.86	23.48	0.38	51.92	Geomatrix
	10/5/2007	75.48	24.67	---	---	50.81	Geomatrix
	11/2/2007	75.48	24.25	---	---	51.23	Geomatrix
	11/12/2007	75.48	24.27	24.25	0.02	51.23	Stantec
	12/28/2007	75.48	25.54	25.51	0.03	49.96	Geomatrix
	8/15/2008	75.48	NM	---	---	NC	Envent
	8/19/2008	75.48	25.18	25.13	0.05	50.34	Envent
	10/17/2008	75.48	25.30	---	---	50.18	Envent
	12/19/2008	75.48	26.31	---	---	49.17	Envent
	1/15/2009	75.48	25.84	---	---	49.64	Envent
	4/21/2009	75.48	25.41	---	---	50.07	Envent
	10/19/2009	75.48	26.30	---	---	49.18	Blaine Tech
	10/4/2010	75.48	26.90	---	---	48.58	Blaine Tech
	4/11/2011	75.48	25.59	---	---	49.89	Blaine Tech
	10/10/2011	75.48	26.52	---	---	48.96	Blaine Tech
	4/16/2012	75.48	27.25	---	---	48.23	Blaine Tech
	7/9/2012	75.48	NM	---	---	NC	Blaine Tech
	10/15/2012	75.48	28.94	---	---	46.54	Blaine Tech
	4/8/2013	75.48	28.81	---	---	46.67	Blaine Tech
	10/7/2013	75.48	29.21	---	---	46.27	Blaine Tech
	4/14/2014	75.48	29.82	---	---	45.66	Blaine Tech
	10/27/2014	75.48	29.92	---	---	45.56	Blaine Tech
	4/20/2015	75.48	30.39	---	---	45.09	Blaine Tech
	10/27/2015	75.48	27.67	---	---	47.81	Blaine Tech
	3/14/2016	75.48	DRY	---	---	NC	Blaine Tech
	4/11/2016	75.48	DRY	---	---	NC	Blaine Tech
	6/29/2016	75.48	DRY	---	---	NC	Blaine Tech
MW-O-2	4/30/2007	74.31	22.53	---	---	51.78	Secor
	11/12/2007	71.90	23.10	---	---	48.80	Stantec
	8/15/2008	71.90	NM	---	---	NC	Envent
	10/17/2008	71.90	24.85	---	---	47.05	Envent
	12/19/2008	71.90	25.51	---	---	46.39	Envent
	3/27/2009	71.90	25.22	---	---	46.68	Envent
	4/21/2009	71.90	NM	---	---	NC	Envent
	7/21/2009	71.90	23.63	---	---	48.27	Envent
	10/19/2009	71.90	NM	---	---	NC	Blaine Tech
	11/9/2009	71.90	25.39	---	---	46.51	Kinder Morgan
	10/4/2010	71.90	26.05	---	---	45.85	Blaine Tech
	4/13/2011	71.9	23.31	---	---	48.59	Blaine Tech
	10/10/2011	71.9	27.53	---	---	44.37	Blaine Tech
	1/9/2012	71.9	28.13	---	---	43.77	Blaine Tech
	4/16/2012	71.9	NM	---	---	NC	Blaine Tech
	7/9/2012	71.9	26.53	---	---	45.37	Blaine Tech
	10/15/2012	71.9	26.89	---	---	45.01	Blaine Tech
	1/14/2013	71.9	26.93	---	---	44.97	Blaine Tech
	4/8/2013	71.9	NM	---	---	NC	Blaine Tech
	6/6/2013	71.9	28.99	---	---	42.91	Blaine Tech
	10/7/2013	71.9	29.06	---	---	42.84	Blaine Tech
	4/14/2014	71.9	29.36	---	---	42.54	Blaine Tech
	10/27/2014	71.9	29.81	29.65	0.16	42.22	Blaine Tech
	4/20/2015	71.9	30.94	29.34	1.60	42.24	Blaine Tech
	5/21/2015	71.9	32.50	27.31	5.19	43.55	Northstar
	5/29/2015	71.9	31.52	30.20	1.32	41.44	Northstar
	6/5/2015	71.9	31.45	30.57	0.88	41.15	Northstar
	6/12/2015	71.9	31.05	30.60	0.45	41.21	Northstar
	6/19/2015	71.9	31.10	30.90	0.20	40.96	Northstar
	6/26/2015	71.9	31.66	31.37	0.29	40.47	Northstar
	10/19/2015	71.9	32.39	30.53	1.86	41.00	Blaine Tech
	3/14/2016	71.9	35.49	34.86	0.63	36.91	Blaine Tech
	4/11/2016	71.9	33.03	32.54	0.49	39.26	Blaine Tech
	6/30/2016	71.9	34.20	---	---	37.70	Kinder Morgan
MW-SF-1	3/12/2007	78.93	28.71	---	---	50.22	Secor
	4/30/2007	78.93	28.44	---	---	50.49	Secor
	8/28/2007	78.93	27.94	---	---	50.99	Stantec

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	11/12/2007	78.93	28.76	---	---	50.17	Stantec
	2/19/2008	78.93	29.50	---	---	49.43	Stantec
	4/14/2008	78.93	29.16	---	---	49.77	Stantec
	8/11/2008	78.93	29.75	---	---	49.18	Stantec
	10/13/2008	78.93	29.86	---	---	49.07	Stantec
	2/23/2009	78.93	30.00	---	---	48.93	Blaine Tech
	4/20/2009	78.93	29.97	---	---	48.96	Blaine Tech
	7/20/2009	78.93	30.98	---	---	47.95	Blaine Tech
	7/22/2009	78.93	30.98	---	---	47.95	Blaine Tech
	10/19/2009	78.93	31.11	---	---	47.82	Blaine Tech
	3/15/2010	78.93	31.74	---	---	47.19	Blaine Tech
	5/24/2010	78.93	30.79	---	---	48.14	Blaine Tech
	5/28/2010	78.93	30.57	---	---	48.36	Blaine Tech
	6/22/2010	78.93	30.84	---	---	48.09	Blaine Tech
	7/12/2010	78.93	30.51	---	---	48.42	Blaine Tech
	10/4/2010	78.93	30.88	---	---	48.05	Blaine Tech
	1/10/2011	78.93	32.51	---	---	46.42	Blaine Tech
	4/11/2011	78.93	29.87	---	---	49.06	Blaine Tech
	7/11/2011	78.93	29.84	---	---	49.09	Blaine Tech
	10/10/2011	78.93	29.60	---	---	49.33	Blaine Tech
	1/9/2012	78.93	31.25	---	---	47.68	Blaine Tech
	4/16/2012	78.93	32.59	---	---	46.34	Blaine Tech
	7/9/2012	78.93	31.24	---	---	47.69	Blaine Tech
	10/15/2012	78.93	32.23	---	---	46.70	Blaine Tech
	1/14/2013	78.93	33.88	---	---	45.05	Blaine Tech
	4/8/2013	78.93	33.38	---	---	45.55	Blaine Tech
	10/7/2013	78.93	37.14	31.72	5.42	46.13	Blaine Tech
	4/14/2014	78.93	37.40	32.69	4.71	45.30	Blaine Tech
	5/6/2014	78.93	39.99	32.82	7.17	44.68	Nieto & Sons
	5/12/2014	78.93	37.31	33.55	3.76	44.63	Nieto & Sons
	5/20/2014	78.93	37.10	34.60	2.50	43.83	Nieto & Sons
	5/27/2014	78.93	36.62	34.30	2.32	44.17	Nieto & Sons
	6/4/2014	78.93	35.98	35.27	0.71	43.52	Nieto & Sons
	6/10/2014	78.93	36.91	34.48	2.43	43.96	Nieto & Sons
	7/3/2014	78.93	36.72	34.71	2.01	43.82	Nieto & Sons
	7/8/2014	78.93	36.60	34.45	2.15	44.05	Blaine Tech
	7/18/2014	78.93	35.18	34.77	0.41	44.08	Blaine Tech
	7/24/2014	78.93	35.30	34.62	0.68	44.17	Blaine Tech
	8/1/2014	78.93	34.74	34.44	0.30	44.43	Blaine Tech
	8/14/2014	78.93	34.75	34.41	0.34	44.45	Blaine Tech
	8/19/2014	78.93	34.66	34.37	0.29	44.50	Blaine Tech
	8/29/2014	78.93	35.65	35.38	0.27	43.50	Blaine Tech
	9/18/2014	78.93	34.85	34.49	0.36	44.37	Blaine Tech
	9/26/2014	78.93	34.78	34.45	0.33	44.41	Blaine Tech
	10/1/2014	78.93	34.77	34.41	0.36	44.45	Blaine Tech
	10/6/2014	78.93	34.78	34.42	0.36	44.44	Blaine Tech
	10/14/2014	78.93	34.65	34.41	0.24	44.47	Blaine Tech
	10/23/2014	78.93	34.84	34.45	0.39	44.40	Blaine Tech
	10/27/2014	78.93	34.80	34.43	0.37	44.43	Blaine Tech
	11/10/2014	78.93	34.91	34.51	0.40	44.34	Blaine Tech
	11/18/2014	78.93	34.80	34.43	0.37	44.43	Blaine Tech
	11/25/2014	78.93	34.53	34.51	0.02	44.42	Blaine Tech
	12/12/2014	78.93	35.18	34.78	0.40	44.07	Blaine Tech
	12/19/2014	78.93	35.34	34.88	0.46	43.96	Blaine Tech
	4/20/2015	78.93	34.89	34.48	0.41	44.37	Blaine Tech
	5/19/2015	78.93	38.45	34.55	3.90	43.60	Northstar
	5/29/2015	78.93	36.36	35.22	1.14	43.48	Northstar
	6/5/2015	78.93	36.50	35.43	1.07	43.29	Northstar
	6/12/2015	78.93	35.80	35.41	0.39	43.44	Northstar
	6/19/2015	78.93	36.02	35.42	0.60	43.39	Northstar
	6/26/2015	78.93	36.60	36.45	0.15	42.45	Northstar
	10/19/2015	78.93	36.35	35.53	0.82	43.24	Blaine Tech
	11/17/2015	78.93	35.65	---	---	43.28	Kinder Morgan
	3/14/2016	78.93	40.40	---	---	38.53	Blaine Tech
	4/11/2016	78.93	37.96	---	---	40.97	Blaine Tech
	6/29/2016	78.93	39.05	---	---	39.88	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
MW-SF-2	4/30/2007	78.45	28.35	28.34	0.01	50.11	Secor
	11/12/2007	78.45	29.18	28.71	0.47	49.65	Stantec
	8/12/2008	78.45	31.11	---	---	47.34	Envent
	10/17/2008	78.45	31.55	31.50	0.05	46.94	Envent
	12/18/2008	78.53	32.75	32.55	0.20	45.94	Envent
	1/15/2009	78.53	30.84	30.57	0.27	47.91	Envent
	3/24/2009	78.53	28.85	---	---	49.68	Envent
	4/21/2009	78.53	29.98	---	---	48.55	Envent
	7/21/2009	78.53	29.85	---	---	48.68	Envent
	10/19/2009	78.53	NM	---	---	NC	Blaine Tech
	12/9/2009	78.53	31.45	---	---	47.08	Kinder Morgan
	10/4/2010	78.53	30.96	30.75	0.21	47.74	Blaine Tech
	1/10/2011	78.53	32.62	32.50	0.12	46.01	Blaine Tech
	4/11/2011	78.53	29.83	---	---	48.70	Blaine Tech
	7/11/2011	78.53	NM	---	---	NC	
	10/10/2011	78.53	29.82	---	---	48.71	Blaine Tech
	1/9/2012	78.53	30.52	---	---	48.01	Blaine Tech
	4/16/2012	78.53	31.28	---	---	47.25	Blaine Tech
	7/9/2012	78.53	33.18	---	---	45.35	Blaine Tech
	10/15/2012	78.53	32.11	---	---	46.42	Blaine Tech
	1/14/2013	78.53	33.59	---	---	44.94	Blaine Tech
	4/8/2013	78.53	33.32	---	---	45.21	Blaine Tech
	10/7/2013	78.53	34.58	33.08	1.50	45.15	Blaine Tech
	4/14/2014	78.53	37.50	33.27	4.23	44.41	Blaine Tech
	5/6/2014	78.53	37.71	33.24	4.47	44.40	Nieto & Sons
	5/12/2014	78.53	37.53	33.34	4.19	44.35	Nieto & Sons
	5/20/2014	78.53	37.62	33.51	4.11	44.20	Nieto & Sons
	5/27/2014	78.53	38.24	33.77	4.47	43.87	Nieto & Sons
	6/4/2014	78.53	34.63	---	---	43.90	Nieto & Sons
	6/10/2014	78.53	38.49	34.00	4.49	43.63	Nieto & Sons
	8/8/2014	78.53	36.23	33.82	2.41	44.23	Blaine Tech
	8/13/2014	78.53	36.75	33.59	3.16	44.31	Blaine Tech
	8/19/2014	78.53	36.90	33.60	3.30	44.27	Blaine Tech
	8/29/2014	78.53	37.11	33.53	3.58	44.28	Blaine Tech
	9/5/2014	78.53	37.09	33.51	3.58	44.30	Blaine Tech
	9/11/2014	78.53	37.12	33.51	3.61	44.30	Blaine Tech
	9/18/2014	78.53	36.89	33.60	3.29	44.27	Blaine Tech
	9/26/2014	78.53	37.28	33.54	3.74	44.24	Blaine Tech
	10/1/2014	78.53	37.18	33.56	3.62	44.25	Blaine Tech
	10/6/2014	78.53	37.16	33.59	3.57	44.23	Blaine Tech
10/14/2014	78.53	37.15	33.64	3.51	44.19	Blaine Tech	
10/23/2014	78.53	37.24	33.61	3.63	44.19	Blaine Tech	
10/27/2014	78.53	37.04	33.54	3.50	44.29	Blaine Tech	
11/3/2014	78.53	37.14	33.55	3.59	44.26	Blaine Tech	
11/10/2014	78.53	37.33	33.56	3.77	44.22	Blaine Tech	
11/18/2014	78.53	37.21	33.64	3.57	44.18	Blaine Tech	
11/25/2014	78.53	37.40	33.69	3.71	44.10	Blaine Tech	
12/3/2014	78.53	37.16	33.60	3.56	44.22	Blaine Tech	
12/12/2014	78.53	38.05	33.91	4.14	43.79	Blaine Tech	
12/19/2014	78.53	38.40	33.95	4.45	43.69	Blaine Tech	
4/20/2015	78.53	36.15	34.73	1.42	43.52	Blaine Tech	
6/25/2015	78.53	38.95	35.57	3.38	42.28	Blaine Tech	
10/21/2015	78.53	36.32	36.13	0.19	42.36	Kinder Morgan	
3/16/2016	78.53	39.27	---	---	39.26	Kinder Morgan	
4/11/2016	78.53	37.47	---	---	41.06	Blaine Tech	
6/29/2016	78.53	38.08	---	---	40.45	Blaine Tech	
MW-SF-3	4/30/2007	77.62	27.72	27.45	0.27	50.12	Secor
	11/12/2007	77.62	29.34	28.28	1.06	49.13	Stantec
	8/12/2008	77.62	30.30	29.05	1.25	48.32	Envent
	10/17/2008	77.62	29.45	---	---	48.17	Envent
	12/18/2008	78.12	31.08	30.82	0.26	47.25	Envent
	1/15/2009	78.12	29.96	29.94	0.02	48.18	Envent
	3/20/2009	78.12	31.10	---	---	47.02	Envent
	3/24/2009	78.12	27.82	---	---	50.30	Envent
	4/21/2009	78.12	29.51	29.50	0.01	48.62	Envent
	7/21/2009	78.12	30.07	---	---	48.05	Envent

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	10/19/2009	78.12	NM	---	---	NC	Blaine Tech
	11/6/2009	78.12	30.37	30.35	0.02	47.77	Kinder Morgan
	12/9/2009	78.12	30.53	---	---	47.59	Kinder Morgan
	9/3/2010	78.12	30.97	30.42	0.55	47.59	Kinder Morgan
	10/4/2010	78.12	30.88	30.30	0.58	47.70	Blaine Tech
	4/12/2011	78.12	29.44	---	---	48.68	Blaine Tech
	10/10/2011	78.12	30.75	---	---	47.37	Blaine Tech
	4/16/2012	78.12	NM	---	---	NC	Blaine Tech
	7/9/2012	78.12	NM	---	---	NC	Blaine Tech
	10/15/2012	78.12	32.47	---	---	45.65	Blaine Tech
	5/24/2013	78.12	33.35	32.51	0.84	45.44	Blaine Tech
	9/25/2013	78.12	34.40	---	---	43.72	Blaine Tech
	10/7/2013	78.12	NM	---	---	NC	Blaine Tech
	11/14/2013	78.12	33.26	---	---	44.86	Blaine Tech
	4/18/2014	78.12	33.72	33.62	0.10	44.48	Blaine Tech
	8/8/2014	78.12	34.07	33.71	0.36	44.34	Blaine Tech
	10/14/2014	78.12	34.55	33.92	0.63	44.07	Blaine Tech
	10/23/2014	78.12	34.57	33.94	0.63	44.05	Blaine Tech
	10/27/2014	78.12	34.49	33.85	0.64	44.14	Blaine Tech
	11/10/2014	78.12	34.65	33.94	0.71	44.04	Blaine Tech
	11/18/2014	78.12	34.62	33.88	0.74	44.09	Blaine Tech
	11/25/2014	78.12	34.22	33.94	0.28	44.12	Blaine Tech
	12/12/2014	78.12	34.89	34.38	0.51	43.64	Blaine Tech
	12/19/2014	78.12	35.04	34.43	0.61	43.57	Blaine Tech
	4/20/2015	78.12	34.52	---	---	43.60	Blaine Tech
	10/21/2015	78.12	35.18	---	---	42.94	Kinder Morgan
	3/14/2016	78.12	39.43	39.40	0.03	38.71	Blaine Tech
	4/11/2016	78.12	37.17	---	---	40.95	Blaine Tech
	6/30/2016	78.12	38.28	---	---	39.84	Kinder Morgan
MW-SF-4	3/12/2007	79.38	30.01	29.41	0.60	49.85	Secor
	4/30/2007	79.38	29.96	29.11	0.85	50.10	Secor
	8/14/2007	79.38	30.34	28.38	1.96	50.60	Geomatrix
	8/28/2007	79.38	29.95	28.30	1.65	50.74	Stantec
	9/11/2007	79.38	29.98	28.43	1.55	50.63	Geomatrix
	10/5/2007	79.38	30.68	28.85	1.83	50.15	Geomatrix
	10/12/2007	79.38	30.27	29.96	0.31	49.36	Geomatrix
	10/19/2007	79.38	30.28	---	---	49.10	Geomatrix
	10/26/2007	79.38	30.52	---	---	48.86	Geomatrix
	11/2/2007	79.38	30.68	---	---	48.70	Geomatrix
	11/12/2007	79.38	29.70	29.69	0.01	49.69	Stantec
	12/21/2007	79.38	30.69	---	---	48.69	Geomatrix
	2/19/2008	79.38	30.22	---	---	49.16	Stantec
	3/21/2008	79.38	30.07	---	---	49.31	Envent
	4/14/2008	79.38	29.95	---	---	49.43	Stantec
	8/8/2008	79.38	30.51	---	---	48.87	Envent
	8/11/2008	79.38	30.57	---	---	48.81	Stantec
	10/16/2008	79.38	30.77	---	---	48.61	Envent
	1/15/2009	79.38	31.14	---	---	48.24	Envent
	2/20/2009	79.38	30.84	---	---	48.54	Envent
	2/23/2009	79.38	30.96	---	---	48.42	Blaine Tech
	4/20/2009	79.38	30.02	29.94	0.08	49.42	Blaine Tech
	4/28/2009	79.38	30.78	---	---	48.60	Envent
	7/17/2009	79.38	31.85	---	---	47.53	Envent
	7/20/2009	79.38	31.65	31.61	0.04	47.76	Blaine Tech
	7/22/2009	79.38	31.65	31.61	0.04	47.76	Blaine Tech
	10/19/2009	79.38	31.93	31.90	0.03	47.47	Blaine Tech
	3/15/2010	79.38	31.95	31.91	0.04	47.46	Blaine Tech
	5/24/2010	79.38	31.60	---	---	47.78	Blaine Tech
	5/28/2010	79.38	26.40	---	---	52.98	Blaine Tech
	6/22/2010	79.38	31.63	---	---	47.75	Blaine Tech
	7/12/2010	79.38	31.37	---	---	48.01	Blaine Tech
	10/4/2010	79.38	31.81	---	---	47.57	Blaine Tech
	1/10/2011	79.38	32.99	---	---	46.39	Blaine Tech
	4/11/2011	79.38	30.85	---	---	48.53	Blaine Tech
	7/11/2011	79.38	30.35	---	---	49.03	Blaine Tech
	10/10/2011	79.38	NM	---	---	NC	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	1/9/2012	79.38	32.07	---	---	47.31	Blaine Tech
	4/16/2012	79.38	33.35	---	---	46.03	Blaine Tech
	7/9/2012	79.38	32.11	---	---	47.27	Blaine Tech
	10/15/2012	79.38	34.04	---	---	45.34	Blaine Tech
	1/14/2013	79.38	34.52	---	---	44.86	Blaine Tech
	4/8/2013	79.38	DRY	---	---	NC	Blaine Tech
	10/7/2013	79.38	DRY	---	---	NC	Blaine Tech
	4/25/2014	79.38	40.03	34.23	5.80	43.96	Blaine Tech
	5/6/2014	79.38	39.78	33.91	5.87	44.27	Nieto & Sons
	5/12/2014	79.38	37.02	34.64	2.38	44.25	Nieto & Sons
	5/20/2014	79.38	36.60	35.60	1.00	43.58	Nieto & Sons
	5/27/2014	79.38	36.12	35.45	0.67	43.79	Nieto & Sons
	6/4/2014	79.38	36.54	35.91	0.63	43.34	Nieto & Sons
	6/10/2014	79.38	37.02	35.38	1.64	43.66	Nieto & Sons
	7/3/2014	79.38	36.98	35.63	1.35	43.47	Nieto & Sons
	7/8/2014	79.38	36.78	35.34	1.44	43.74	Blaine Tech
	7/18/2014	79.38	35.88	35.55	0.33	43.76	Blaine Tech
	7/24/2014	79.38	35.98	35.42	0.56	43.85	Blaine Tech
	8/1/2014	79.38	35.57	35.30	0.27	44.02	Blaine Tech
	8/14/2014	79.38	35.42	35.23	0.19	44.11	Blaine Tech
	8/19/2014	79.38	35.36	35.21	0.15	44.14	Blaine Tech
	8/29/2014	79.38	35.32	35.20	0.12	44.16	Blaine Tech
	9/18/2014	79.38	35.55	35.30	0.25	44.03	Blaine Tech
	9/26/2014	79.38	35.56	35.30	0.26	44.03	Blaine Tech
	10/1/2014	79.38	35.56	35.24	0.32	44.07	Blaine Tech
	10/6/2014	79.38	35.48	35.22	0.26	44.11	Blaine Tech
	10/14/2014	79.38	35.33	35.20	0.13	44.15	Blaine Tech
	10/23/2014	79.38	35.51	35.22	0.29	44.10	Blaine Tech
	10/27/2014	79.38	35.54	35.25	0.29	44.07	Blaine Tech
	11/18/2014	79.38	35.56	35.25	0.31	44.07	Blaine Tech
	11/25/2014	79.38	35.66	35.32	0.34	43.99	Blaine Tech
	12/12/2014	79.38	35.81	35.58	0.23	43.75	Blaine Tech
	12/19/2014	79.38	35.75	35.62	0.13	43.73	Blaine Tech
	4/20/2015	79.38	37.78	35.29	2.49	43.58	Blaine Tech
	5/19/2015	79.38	39.22	35.28	3.94	43.29	Northstar
	5/29/2015	79.38	37.10	35.80	1.30	43.31	Northstar
	6/5/2015	79.38	36.85	36.15	0.70	43.09	Northstar
	6/12/2015	79.38	36.55	36.15	0.40	43.15	Northstar
	6/19/2015	79.38	36.68	36.42	0.26	42.91	Northstar
	6/26/2015	79.38	37.23	36.96	0.27	42.36	Northstar
	10/19/2015	79.38	38.12	36.25	1.87	42.75	Blaine Tech
	11/17/2015	79.38	37.83	35.98	1.85	43.02	Kinder Morgan
	3/14/2016	79.38	40.80	---	---	38.58	Kinder Morgan
	4/11/2016	79.38	37.76	---	---	41.62	Blaine Tech
	6/29/2016	79.38	39.54	---	---	39.84	Blaine Tech
MW-SF-5	4/30/2007	79.74	29.54	---	---	50.20	Secor
	8/21/2007	79.74	28.36	---	---	51.38	Geomatrix
	8/28/2007	79.74	28.84	---	---	50.90	Stantec
	10/5/2007	79.74	29.50	---	---	50.24	Geomatrix
	11/2/2007	79.74	31.50	---	---	48.24	Geomatrix
	11/12/2007	79.74	29.93	---	---	49.81	Stantec
	12/21/2007	79.74	31.00	---	---	48.74	Geomatrix
	4/14/2008	79.74	30.20	---	---	49.54	Stantec
	8/11/2008	79.74	30.85	---	---	48.89	Stantec
	10/13/2008	79.74	30.93	---	---	48.81	Stantec
	4/20/2009	79.74	30.99	---	---	48.75	Blaine Tech
	10/19/2009	79.74	NM	---	---	NC	Blaine Tech
	5/24/2010	79.74	31.55	---	---	48.19	Blaine Tech
	5/28/2010	79.74	31.44	---	---	48.30	Blaine Tech
	6/22/2010	79.74	31.57	---	---	48.17	Blaine Tech
	10/4/2010	79.74	31.39	---	---	48.35	Blaine Tech
	1/10/2011	79.74	33.80	---	---	45.94	Blaine Tech
	4/11/2011	79.74	31.03	---	---	48.71	Blaine Tech
	7/11/2011	79.74	NM	---	---	NC	
	10/10/2011	79.74	31.28	---	---	48.46	Blaine Tech
	1/9/2012	79.74	32.12	---	---	47.62	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	4/16/2012	79.74	33.30	---	---	46.44	Blaine Tech
	7/9/2012	79.74	34.45	---	---	45.29	Blaine Tech
	10/15/2012	79.74	33.28	---	---	46.46	Blaine Tech
	1/14/2013	79.74	33.37	---	---	46.37	Blaine Tech
	4/8/2013	79.74	34.28	---	---	45.46	Blaine Tech
	10/7/2013	79.74	34.58	---	---	45.16	Blaine Tech
	4/14/2014	79.74	35.33	---	---	44.41	Blaine Tech
	10/27/2014	79.74	35.48	---	---	44.26	Blaine Tech
	4/20/2015	79.74	36.05	---	---	43.69	Blaine Tech
	10/19/2015	79.74	36.82	---	---	42.92	Blaine Tech
	3/14/2016	79.74	DRY	---	---	NC	Blaine Tech
	4/11/2016	79.74	DRY	---	---	NC	Blaine Tech
	6/29/2016	79.74	DRY	---	---	NC	Blaine Tech
MW-SF-6	4/30/2007	79.96	27.44	27.20	0.24	52.71	Secor
	11/12/2007	79.96	27.14	---	---	52.82	Stantec
	8/12/2008	79.96	29.82	---	---	50.14	Envent
	10/17/2008	79.96	29.75	---	---	50.21	Envent
	12/18/2008	76.8	30.73	---	---	46.07	Envent
	1/15/2009	76.8	31.35	---	---	45.45	Envent
	3/24/2009	76.80	30.50	---	---	46.30	Envent
	4/21/2009	76.80	28.45	---	---	48.35	Envent
	7/21/2009	76.80	27.22	---	---	49.58	Envent
	10/19/2009	76.80	NM	---	---	NC	Blaine Tech
	11/6/2009	76.80	29.10	---	---	47.70	Kinder Morgan
	12/9/2009	76.80	31.35	---	---	45.45	Kinder Morgan
	10/4/2010	76.80	29.09	---	---	47.71	Blaine Tech
	1/10/2011	76.80	30.87	---	---	45.93	Blaine Tech
	4/11/2011	76.80	28.16	---	---	48.64	Blaine Tech
	7/11/2011	76.80	NM	---	---	NC	
	10/10/2011	76.80	28.21	---	---	48.59	Blaine Tech
	1/9/2012	76.80	29.03	---	---	47.77	Blaine Tech
	4/16/2012	76.80	29.66	---	---	47.14	Blaine Tech
	7/9/2012	76.80	31.46	---	---	45.34	Blaine Tech
	10/15/2012	76.80	31.44	---	---	45.36	Blaine Tech
	1/14/2013	76.80	31.53	---	---	45.27	Blaine Tech
	4/8/2013	76.80	30.21	28.81	1.40	47.71	Blaine Tech
	10/7/2013	76.80	NM	---	---	NC	Blaine Tech
	11/14/2013	76.80	31.90	---	---	44.90	Blaine Tech
	4/18/2014	76.80	33.30	32.15	1.15	44.42	Blaine Tech
	8/8/2014	76.8	34.50	33.31	1.19	43.25	Blaine Tech
	8/13/2014	76.8	32.95	32.54	0.41	44.18	Blaine Tech
	8/19/2014	76.8	32.87	32.62	0.25	44.13	Blaine Tech
	8/29/2014	76.8	32.79	32.56	0.23	44.19	Blaine Tech
	9/5/2014	76.8	32.81	32.59	0.22	44.17	Blaine Tech
	9/18/2014	76.8	32.95	32.65	0.30	44.09	Blaine Tech
	9/26/2014	76.8	32.94	32.61	0.33	44.12	Blaine Tech
	10/1/2014	76.8	32.91	32.60	0.31	44.14	Blaine Tech
	10/6/2014	76.8	32.90	32.61	0.29	44.13	Blaine Tech
	10/14/2014	76.8	33.72	33.60	0.12	43.18	Blaine Tech
	10/23/2014	76.8	34.57	33.94	0.63	42.73	Blaine Tech
	10/27/2014	76.8	32.92	32.58	0.34	44.15	Blaine Tech
	11/18/2014	76.8	32.99	32.62	0.37	44.11	Blaine Tech
	11/25/2014	76.8	32.66	32.58	0.08	44.20	Blaine Tech
	12/12/2014	76.8	33.45	33.07	0.38	43.65	Blaine Tech
	12/19/2014	76.8	33.60	33.15	0.45	43.56	Blaine Tech
	4/20/2015	76.8	33.23	33.11	0.12	43.67	Blaine Tech
	10/21/2015	76.8	34.28	---	---	42.52	Kinder Morgan
	3/14/2016	76.8	38.10	38.08	0.02	38.72	Blaine Tech
	4/11/2016	76.8	35.83	---	---	40.97	Blaine Tech
	6/29/2016	76.8	36.89	---	---	39.91	Blaine Tech
MW-SF-9	4/30/2007	74.1	22.66	---	---	51.44	Secor
	8/14/2007	74.1	28.73	28.61	0.12	45.47	Geomatrix
	8/21/2007	74.1	26.55	---	---	47.55	Geomatrix
	8/28/2007	74.1	20.55	---	---	53.55	Stantec
	9/11/2007	74.1	19.40	---	---	54.70	Geomatrix
	10/5/2007	74.1	26.84	---	---	47.26	Geomatrix

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells
SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	11/2/2007	74.1	22.76	---	---	51.34	Geomatrix
	11/12/2007	74.1	22.96	---	---	51.14	Stantec
	12/21/2007	74.1	24.05	---	---	50.05	Geomatrix
	4/14/2008	74.1	24.23	---	---	49.87	Stantec
	10/13/2008	74.1	24.83	---	---	49.27	Stantec
	4/20/2009	74.10	25.27	---	---	48.83	Blaine Tech
	10/19/2009	74.10	26.45	---	---	47.65	Blaine Tech
	5/24/2010	74.10	25.80	---	---	48.30	Blaine Tech
	5/28/2010	74.10	25.66	---	---	48.44	Blaine Tech
	6/22/2010	74.10	25.84	---	---	48.26	Blaine Tech
	10/4/2010	74.10	26.10	---	---	48.00	Blaine Tech
	1/10/2011	74.10	27.41	---	---	46.69	Blaine Tech
	4/11/2011	74.10	24.16	---	---	49.94	Blaine Tech
	7/11/2011	74.10	NM	---	---	NC	
	10/10/2011	74.10	25.02	---	---	49.08	Blaine Tech
	1/9/2012	74.10	25.98	---	---	48.12	Blaine Tech
	4/16/2012	74.10	25.92	---	---	48.18	Blaine Tech
	7/9/2012	74.10	26.44	---	---	47.66	Blaine Tech
	10/15/2012	74.10	NM	---	---	NC	Blaine Tech
	4/8/2013	74.10	DRY	---	---	NC	Blaine Tech
	6/6/2013	74.10	28.53	---	---	45.57	Blaine Tech
	10/7/2013	74.10	28.95	---	---	45.15	Blaine Tech
	4/25/2014	74.10	34.75	27.95	6.80	44.89	Blaine Tech
	5/5/2014	74.10	37.81	31.76	6.05	41.22	Nieto & Sons
	5/12/2014	74.10	32.32	29.11	3.21	44.40	Nieto & Sons
	5/20/2014	74.10	30.75	29.95	0.80	44.00	Nieto & Sons
	5/27/2014	74.1	38.08	32.32	5.76	40.71	Nieto & Sons
	6/4/2014	74.1	32.19	28.61	3.58	44.83	Nieto & Sons
	6/10/2014	74.1	36.27	28.85	7.42	43.88	Nieto & Sons
	7/3/2014	74.1	39.26	32.59	6.67	40.28	Nieto & Sons
	7/8/2014	74.1	36.40	28.60	7.80	44.06	Blaine Tech
	7/18/2014	74.1	31.04	29.66	1.38	44.18	Blaine Tech
	7/24/2014	74.1	31.15	29.85	1.30	44.01	Blaine Tech
	8/1/2014	74.1	30.25	29.85	0.40	44.18	Blaine Tech
	8/14/2014	74.1	30.13	29.82	0.31	44.22	Blaine Tech
	8/19/2014	74.1	30.08	29.85	0.23	44.21	Blaine Tech
	8/29/2014	74.1	30.10	29.81	0.29	44.24	Blaine Tech
	9/5/2014	74.1	30.13	29.84	0.29	44.21	Blaine Tech
	9/11/2014	74.1	29.49	28.47	1.02	45.44	Blaine Tech
	9/18/2014	74.1	30.29	29.90	0.39	44.13	Blaine Tech
	9/26/2014	74.1	30.25	29.84	0.41	44.18	Blaine Tech
	10/1/2014	74.1	30.24	29.84	0.40	44.19	Blaine Tech
	10/6/2014	74.1	30.24	29.83	0.41	44.19	Blaine Tech
	10/14/2014	74.1	30.12	29.81	0.31	44.23	Blaine Tech
	10/23/2014	74.1	30.27	29.85	0.42	44.17	Blaine Tech
	10/27/2014	74.1	30.29	29.89	0.40	44.14	Blaine Tech
	11/18/2014	74.1	30.35	29.86	0.49	44.15	Blaine Tech
	11/25/2014	74.1	30.42	29.91	0.51	44.10	Blaine Tech
	12/12/2014	74.1	30.65	30.10	0.55	43.90	Blaine Tech
	12/19/2014	74.1	30.80	30.13	0.67	43.85	Blaine Tech
	4/20/2015	74.1	36.69	27.67	9.02	44.76	Blaine Tech
	5/19/2015	74.1	35.68	26.83	8.85	45.63	Blaine Tech
	5/21/2015	74.1	32.50	27.31	5.19	45.83	Northstar
	5/29/2015	74.1	32.95	30.10	2.85	43.47	Northstar
	6/2/2015	74.1	31.67	30.45	1.22	43.42	Northstar
	6/5/2015	74.10	31.85	30.60	1.25	43.27	Northstar
	6/12/2015	74.10	31.28	30.75	0.53	43.25	Northstar
	6/19/2015	74.10	31.30	31.00	0.30	43.04	Northstar
	6/26/2015	74.10	31.20	29.50	1.70	44.29	Northstar
	8/11/2015	74.10	36.90	29.90	7.00	42.90	Northstar
	8/18/2015	74.10	35.19	30.25	4.94	42.94	Northstar
	8/28/2015	74.10	31.60	30.75	0.85	43.19	Kinder Morgan
	9/1/2015	74.10	31.78	30.90	0.88	43.04	Kinder Morgan
	10/16/2015	74.10	31.60	31.09	0.51	42.92	Blaine Tech
	10/19/2015	74.10	31.44	31.04	0.40	42.99	Kinder Morgan
	10/30/2015	74.10	32.60	32.06	0.54	41.94	Kinder Morgan

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	11/17/2015	74.10	31.71	31.68	0.03	42.41	Kinder Morgan
	3/14/2016	74.10	34.14	---	---	39.96	Blaine Tech
	4/11/2016	74.10	32.89	---	---	41.21	Blaine Tech
	6/29/2016	74.10	34.00	---	---	40.10	Blaine Tech
MW-SF-10	10/17/2008	76.53	27.49	---	---	49.04	Envent
	10/19/2009	76.53	28.61	---	---	47.92	Blaine Tech
	10/4/2010	76.53	28.50	28.36	0.14	48.14	Blaine Tech
	4/11/2011	76.53	27.41	27.37	0.04	49.15	Blaine Tech
	10/10/2011	76.53	27.60	---	---	48.93	Blaine Tech
	4/16/2012	76.53	28.81	---	---	47.72	Blaine Tech
	7/9/2012	76.53	NM	---	---	NC	Blaine Tech
	10/15/2012	76.53	29.27	---	---	47.26	Blaine Tech
	4/8/2013	76.53	DRY	---	---	NC	Blaine Tech
	10/7/2013	76.53	DRY	---	---	NC	Blaine Tech
	4/14/2014	76.53	DRY	---	---	NC	Blaine Tech
	10/27/2014	76.53	DRY	---	---	NC	Blaine Tech
	4/20/2015	76.53	DRY	---	---	NC	Blaine Tech
	10/19/2015	76.53	DRY	---	---	NC	Blaine Tech
	3/14/2016	76.53	DRY	---	---	NC	Blaine Tech
4/11/2016	76.53	DRY	---	---	NC	Blaine Tech	
6/29/2016	76.53	DRY	---	---	NC	Blaine Tech	
MW-SF-11	8/14/2007	78.56	28.58	28.30	0.28	50.20	Geomatrix
	8/21/2007	78.56	28.76	28.63	0.13	49.90	Geomatrix
	8/28/2007	78.56	28.22	---	---	50.34	Stantec
	9/11/2007	78.56	26.90	---	---	51.66	Geomatrix
	10/5/2007	78.56	28.43	---	---	50.13	Geomatrix
	11/2/2007	78.56	29.48	29.38	0.10	49.16	Geomatrix
	11/12/2007	78.56	29.03	---	---	49.53	Stantec
	8/15/2008	78.56	30.13	---	---	48.43	Envent
	10/17/2008	78.56	30.50	---	---	48.06	Envent
	12/18/2008	78.56	29.92	---	---	48.64	Envent
	1/15/2009	78.56	30.32	---	---	48.24	Envent
	3/24/2009	78.56	31.05	---	---	47.51	Envent
	4/21/2009	78.56	30.03	---	---	48.53	Envent
	7/21/2009	78.56	30.89	---	---	47.67	Envent
	10/19/2009	78.56	NM	---	---	NC	Blaine Tech
	11/9/2009	78.56	31.00	---	---	47.56	Kinder Morgan
	9/3/2010	78.56	31.22	---	---	47.34	Kinder Morgan
	10/4/2010	78.56	30.94	---	---	47.62	Blaine Tech
	4/12/2011	78.56	30.82	---	---	47.74	Blaine Tech
	10/10/2011	78.56	30.10	---	---	48.46	Blaine Tech
	4/16/2012	78.56	NM	---	---	NC	Blaine Tech
	7/9/2012	78.56	NM	---	---	NC	Blaine Tech
	10/15/2012	78.56	33.28	---	---	45.28	Blaine Tech
	4/8/2013	78.56	33.11	---	---	45.45	Blaine Tech
	10/7/2013	78.56	33.91	---	---	44.65	Blaine Tech
	4/14/2014	78.56	35.20	34.95	0.25	43.56	Blaine Tech
	5/5/2014	78.56	36.52	33.71	2.81	44.29	Nieto & Sons
	5/12/2014	78.56	35.45	33.87	1.58	44.37	Nieto & Sons
	5/27/2014	78.56	35.38	34.65	0.73	43.76	Nieto & Sons
	6/4/2014	78.56	35.40	35.32	0.08	43.22	Nieto & Sons
	8/8/2014	78.56	36.22	33.11	3.11	44.83	Blaine Tech
	8/13/2014	78.56	36.22	33.47	2.75	44.54	Blaine Tech
	8/19/2014	78.56	36.46	33.94	2.52	44.12	Blaine Tech
8/29/2014	78.56	36.68	33.83	2.85	44.16	Blaine Tech	
9/5/2014	78.56	36.62	33.80	2.82	44.20	Blaine Tech	
9/11/2014	78.56	37.15	33.78	3.37	44.11	Blaine Tech	
9/18/2014	78.56	36.79	33.93	2.86	44.06	Blaine Tech	
9/26/2014	78.56	36.89	33.88	3.01	44.08	Blaine Tech	
10/1/2014	78.56	34.95	33.32	1.63	44.91	Blaine Tech	
10/6/2014	78.56	36.36	33.95	2.41	44.13	Blaine Tech	
10/14/2014	78.56	36.67	33.86	2.81	44.14	Blaine Tech	
10/23/2014	78.56	36.86	33.86	3.00	44.10	Blaine Tech	
10/27/2014	78.56	36.20	33.99	2.21	44.13	Blaine Tech	
11/3/2014	78.56	36.91	33.84	3.07	44.11	Blaine Tech	
11/18/2014	78.56	36.78	33.95	2.83	44.04	Blaine Tech	

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	11/25/2014	78.56	36.65	34.03	2.62	44.01	Blaine Tech
	12/3/2014	78.56	36.71	33.94	2.77	44.07	Blaine Tech
	12/12/2014	78.56	37.29	34.08	3.21	43.84	Blaine Tech
	12/19/2014	78.56	38.03	34.04	3.99	43.72	Blaine Tech
	3/17/2015	78.56	35.94	35.50	0.44	42.97	Kinder Morgan
	4/20/2015	78.56	38.89	34.86	4.03	42.89	Kinder Morgan
	10/20/2015	78.56	37.42	35.38	2.04	42.77	Kinder Morgan
	3/16/2016	78.56	39.56	---	---	39.00	Kinder Morgan
	4/11/2016	78.56	37.62	---	---	40.94	Blaine Tech
	6/29/2016	78.56	37.06	---	---	41.50	Blaine Tech
MW-SF-12	8/14/2007	78.07	27.76	---	---	50.31	Geomatrix
	8/21/2007	78.07	27.43	---	---	50.64	Geomatrix
	8/28/2007	78.07	27.58	---	---	50.49	Stantec
	9/11/2007	78.07	27.73	---	---	50.34	Geomatrix
	10/5/2007	78.07	28.06	---	---	50.01	Geomatrix
	11/2/2007	78.07	29.59	---	---	48.48	Geomatrix
	11/12/2007	78.07	28.33	---	---	49.74	Stantec
	8/12/2008	78.07	30.02	---	---	48.05	Envent
	10/17/2008	78.07	30.42	---	---	47.65	Envent
	12/18/2008	78.07	31.55	---	---	46.52	Envent
	1/15/2009	78.07	30.11	---	---	47.96	Envent
	3/24/2009	78.07	29.41	---	---	48.66	Envent
	4/21/2009	78.07	29.52	---	---	48.55	Envent
	7/21/2009	78.07	28.58	---	---	49.49	Envent
	10/19/2009	78.07	NM	---	---	NC	Blaine Tech
	11/4/2009	78.07	30.36	---	---	47.71	Kinder Morgan
	2/4/2010	78.07	29.20	---	---	48.87	Kinder Morgan
	10/4/2010	78.07	30.70	---	---	47.37	Blaine Tech
	4/11/2011	78.07	29.47	---	---	48.60	Blaine Tech
	10/10/2011	78.07	26.60	---	---	51.47	Blaine Tech
	4/16/2012	78.07	31.40	---	---	46.67	Blaine Tech
	7/9/2012	78.07	NM	---	---	NC	Blaine Tech
	10/15/2012	78.07	32.12	---	---	45.95	Blaine Tech
	4/8/2013	78.07	DRY	---	---	NC	Blaine Tech
	10/7/2013	78.07	NM	---	---	NC	Blaine Tech
	4/14/2014	78.07	38.04	32.67	5.37	44.33	Blaine Tech
	5/20/2014	78.07	37.80	32.90	4.90	44.19	Nieto & Sons
	5/27/2014	78.07	33.27	---	---	44.80	Nieto & Sons
	6/4/2014	78.07	32.78	---	---	45.29	Nieto & Sons
	6/10/2014	78.07	33.76	---	---	44.31	Nieto & Sons
	7/3/2014	78.07	NM	33.58	---	NC	Nieto & Sons
	7/24/2014	78.07	NM	33.35	3.97	NC	Blaine Tech
	8/1/2014	78.07	37.20	33.17	4.03	44.09	Blaine Tech
	9/5/2014	78.07	38.52	32.93	5.59	44.02	Blaine Tech
	9/11/2014	78.07	38.56	32.98	5.58	43.97	Blaine Tech
	9/18/2014	78.07	38.25	33.09	5.16	43.95	Blaine Tech
	9/26/2014	78.07	38.03	33.03	5.00	44.04	Blaine Tech
	10/1/2014	78.07	37.82	33.08	4.74	44.04	Blaine Tech
	10/6/2014	78.07	37.63	33.07	4.56	44.09	Blaine Tech
	10/14/2014	78.07	37.56	33.13	4.43	44.05	Blaine Tech
	10/23/2014	78.07	37.56	33.06	4.50	44.11	Blaine Tech
	10/27/2014	78.07	37.40	33.08	4.32	44.13	Blaine Tech
	11/3/2014	78.07	37.48	33.09	4.39	44.10	Blaine Tech
	11/18/2014	78.07	37.44	33.15	4.29	44.06	Blaine Tech
	11/25/2014	78.07	37.35	33.21	4.14	44.03	Blaine Tech
	12/3/2014	78.07	37.31	33.12	4.19	44.11	Blaine Tech
	12/12/2014	78.07	37.92	33.45	4.47	43.73	Blaine Tech
	12/19/2014	78.07	38.25	33.50	4.75	43.62	Blaine Tech
	3/17/2015	78.07	36.42	34.05	2.37	43.55	Kinder Morgan
	4/20/2015	78.07	36.42	34.05	2.37	43.55	Blaine Tech
	10/20/2015	78.07	36.78	34.84	1.94	42.84	Kinder Morgan
	3/16/2016	78.07	39.03	---	---	39.04	Kinder Morgan
	4/11/2016	78.07	37.13	---	---	40.94	Blaine Tech
	6/29/2016	78.07	38.34	38.28	0.06	39.78	Blaine Tech
MW-SF-13	8/14/2007	73.40	22.98	---	---	50.42	Geomatrix
	8/21/2007	73.40	23.11	---	---	50.29	Geomatrix

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	8/28/2007	73.40	22.85	---	---	50.55	Stantec
	9/11/2007	73.40	23.10	---	---	50.30	Geomatrix
	10/5/2007	73.40	28.11	---	---	45.29	Geomatrix
	11/2/2007	73.40	25.43	25.41	0.02	47.99	Geomatrix
	11/12/2007	73.40	23.70	---	---	49.70	Stantec
	12/21/2007	73.40	24.45	24.42	0.03	48.97	Geomatrix
	8/15/2008	73.40	27.38	24.11	3.27	48.47	Envent
	10/17/2008	73.40	27.28	24.33	2.95	48.33	Envent
	10/21/2008	73.40	27.14	24.26	2.88	48.42	Envent
	12/17/2008	73.40	26.21	24.70	1.51	48.32	Envent
	1/15/2009	73.40	26.90	24.80	2.10	48.08	Envent
	3/27/2009	73.40	26.46	25.49	0.97	47.67	Envent
	4/21/2009	73.40	24.86	24.78	0.08	48.60	Envent
	7/21/2009	73.40	25.72	25.48	0.24	47.86	Envent
	10/19/2009	73.40	NM	---	---	NC	Blaine Tech
	11/6/2009	73.40	25.72	---	---	47.68	Kinder Morgan
	2/4/2010	73.40	25.43	25.30	0.13	48.07	Kinder Morgan
	9/3/2010	73.40	27.40	25.71	1.69	47.27	Kinder Morgan
	10/4/2010	73.40	26.95	25.92	1.03	47.22	Blaine Tech
	4/12/2011	73.40	24.79	24.78	0.01	48.62	Blaine Tech
	10/10/2011	73.40	26.00	---	---	47.40	Blaine Tech
	4/16/2012	73.40	27.19	---	---	46.21	Blaine Tech
	7/9/2012	73.40	NM	---	---	NC	Blaine Tech
	10/15/2012	73.40	27.01	---	---	46.39	Blaine Tech
	4/8/2013	73.40	27.90	---	---	45.50	Blaine Tech
	10/7/2013	73.40	NM	---	---	NC	Blaine Tech
	11/14/2013	73.40	29.95	28.25	1.70	44.73	Blaine Tech
	4/14/2014	73.40	31.36	28.47	2.89	44.21	Blaine Tech
	5/5/2014	73.40	31.62	28.49	3.13	44.13	Nieto & Sons
	5/12/2014	73.40	30.02	28.88	1.14	44.24	Nieto & Sons
	5/20/2014	73.40	31.10	29.77	1.33	43.30	Nieto & Sons
	5/27/2014	73.40	30.17	29.48	0.69	43.75	Nieto & Sons
	6/4/2014	73.40	30.22	---	---	43.18	Nieto & Sons
	6/10/2014	73.40	30.20	29.76	0.44	43.53	Nieto & Sons
	7/3/2014	73.40	30.49	29.88	0.61	43.37	Nieto & Sons
	7/24/2014	73.40	30.50	29.54	0.96	43.62	Blaine Tech
	8/1/2014	73.40	29.82	29.25	0.57	44.01	Blaine Tech
	8/8/2014	73.40	34.07	33.71	0.36	39.60	Blaine Tech
	8/14/2014	73.40	29.96	29.13	0.83	44.06	Blaine Tech
	8/19/2014	73.40	29.91	29.15	0.76	44.06	Blaine Tech
	8/29/2014	73.40	30.15	29.02	1.13	44.10	Blaine Tech
	9/5/2014	73.40	30.19	29.08	1.11	44.04	Blaine Tech
	9/11/2014	73.40	30.66	28.91	1.75	44.05	Blaine Tech
	9/18/2014	73.40	30.41	29.15	1.26	43.94	Blaine Tech
	9/26/2014	73.40	30.18	29.14	1.04	44.00	Blaine Tech
	10/1/2014	73.40	30.38	29.05	1.33	44.02	Blaine Tech
	10/6/2014	73.40	30.10	29.12	0.98	44.04	Blaine Tech
	10/13/2014	73.40	30.28	29.07	1.21	44.03	Blaine Tech
	10/23/2014	73.40	30.72	28.95	1.77	44.01	Blaine Tech
	10/27/2014	73.40	30.21	29.06	1.15	44.05	Blaine Tech
	11/3/2014	73.40	30.62	28.93	1.69	44.05	Blaine Tech
	11/18/2014	73.40	30.54	29.11	1.43	43.93	Blaine Tech
	11/25/2014	73.40	29.48	29.14	0.34	44.18	Blaine Tech
	12/3/2014	73.40	31.02	28.93	2.09	43.95	Blaine Tech
	12/12/2014	73.40	31.05	29.40	1.65	43.59	Blaine Tech
	12/19/2014	73.40	31.11	29.40	1.71	43.57	Blaine Tech
	4/20/2015	73.40	32.44	29.04	3.40	43.51	Blaine Tech
	10/19/2015	73.40	35.16	29.31	5.85	42.63	Blaine Tech
	3/14/2016	73.40	34.72	---	---	38.68	Blaine Tech
	4/11/2016	73.40	32.28	---	---	41.12	Blaine Tech
	6/29/2016	73.40	33.62	---	---	39.78	Blaine Tech
MW-SF-14	8/14/2007	78.16	27.68	---	---	50.48	Geomatrix
	8/21/2007	78.16	27.60	---	---	50.56	Geomatrix
	8/28/2007	78.16	27.53	---	---	50.63	Stantec
	9/11/2007	78.16	27.66	---	---	50.50	Geomatrix
	10/5/2007	78.16	27.75	---	---	50.41	Geomatrix

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	11/2/2007	78.16	29.83	---	---	48.33	Geomatrix
	11/12/2007	78.16	NM	---	---	NC	Secor
	8/15/2008	78.16	29.77	29.24	0.53	48.81	Envent
	10/17/2008	78.16	29.52	29.50	0.02	48.66	Envent
	12/18/2008	78.16	30.62	---	---	47.54	Envent
	1/15/2009	78.16	30.08	---	---	48.08	Envent
	3/24/2009	78.16	29.73	---	---	48.43	Envent
	4/21/2009	78.16	29.61	---	---	48.55	Envent
	7/21/2009	78.16	29.20	---	---	48.96	Envent
	10/19/2009	78.16	NM	---	---	NC	Blaine Tech
	11/6/2009	78.16	30.48	---	---	47.68	Kinder Morgan
	12/9/2009	78.16	30.68	---	---	47.48	Kinder Morgan
	6/22/2010	78.16	26.17	---	---	51.99	Blaine Tech
	10/4/2010	78.16	30.54	---	---	47.62	Blaine Tech
	4/12/2011	78.16	29.55	---	---	48.61	Blaine Tech
	10/10/2011	78.16	29.84	---	---	48.32	Blaine Tech
	4/16/2012	78.16	NM	---	---	NC	Blaine Tech
	7/9/2012	78.16	NM	---	---	NC	Blaine Tech
	10/15/2012	78.16	30.02	---	---	48.14	Blaine Tech
	4/8/2013	78.16	32.75	---	---	45.41	Blaine Tech
	5/24/2013	78.16	32.75	---	---	45.41	Blaine Tech
	9/26/2013	78.16	34.50	34.25	0.25	43.86	Blaine Tech
	10/7/2013	78.16	NM	---	---	NC	Blaine Tech
	11/14/2013	78.16	33.57	33.19	0.38	44.89	Blaine Tech
	4/14/2014	78.16	34.81	33.56	1.25	44.35	Blaine Tech
	8/8/2014	78.16	34.24	33.98	0.26	44.13	Blaine Tech
	10/14/2014	78.16	34.36	33.80	0.56	44.25	Blaine Tech
	10/23/2014	78.16	34.49	34.43	0.06	43.72	Blaine Tech
	10/27/2014	78.16	34.40	33.97	0.43	44.10	Blaine Tech
	11/18/2014	78.16	34.27	34.07	0.20	44.05	Blaine Tech
	4/20/2015	78.16	34.48	---	---	43.68	Blaine Tech
	10/21/2015	78.16	35.25	---	---	42.91	Blaine Tech
	3/14/2016	78.16	36.21	---	---	41.95	Blaine Tech
	4/11/2016	78.16	37.14	---	---	41.02	Blaine Tech
	6/29/2016	78.16	37.36	---	---	40.80	Blaine Tech
MW-SF-15	8/14/2007	78.27	27.78	27.75	0.03	50.51	Geomatrix
	8/21/2007	78.27	27.69	27.65	0.04	50.61	Geomatrix
	8/28/2007	78.27	27.65	27.61	0.04	50.65	Stantec
	9/11/2007	78.27	27.62	---	---	50.65	Geomatrix
	10/5/2007	78.27	28.15	---	---	50.12	Geomatrix
	11/2/2007	78.27	30.45	30.20	0.25	48.02	Geomatrix
	11/12/2007	78.27	28.75	---	---	49.52	Stantec
	8/15/2008	78.27	30.12	29.35	0.77	48.77	Envent
	10/17/2008	78.27	30.80	29.44	1.36	48.56	Envent
	10/21/2008	78.27	30.80	29.31	1.49	48.66	Envent
	12/18/2008	78.27	32.11	30.56	1.55	47.40	Envent
	1/15/2009	78.27	31.75	29.70	2.05	48.16	Envent
	3/24/2009	78.27	30.32	29.93	0.39	48.26	Envent
	4/21/2009	78.27	29.96	29.60	0.36	48.60	Envent
	7/21/2009	78.27	30.45	---	---	47.82	Envent
	10/19/2009	78.27	NM	---	---	NC	Blaine Tech
	11/4/2009	78.27	31.10	30.45	0.36	47.46	Kinder Morgan
	12/9/2009	78.27	30.87	---	---	47.40	Kinder Morgan
	10/4/2010	78.27	30.66	30.65	0.01	47.62	Blaine Tech
	4/12/2011	78.27	30.50	29.40	1.10	48.65	Blaine Tech
	10/10/2011	78.27	29.60	---	---	48.67	Blaine Tech
	12/2/2011	78.27	31.40	30.05	1.35	47.95	Blaine Tech
	4/16/2012	78.27	32.48	32.39	0.09	45.86	Blaine Tech
	7/9/2012	78.27	NM	---	---	NC	Blaine Tech
	10/15/2012	78.16	33.04	---	---	45.12	Blaine Tech
	4/8/2013	78.27	33.90	---	---	44.37	Blaine Tech
	5/24/2013	78.27	33.90	---	---	44.37	Blaine Tech
	10/7/2013	78.27	NM	---	---	NC	Blaine Tech
	11/14/2013	78.27	33.41	33.38	0.03	44.88	Blaine Tech
	4/18/2014	78.27	33.85	---	---	44.42	Blaine Tech
	8/8/2014	78.27	34.87	33.96	0.91	44.13	Blaine Tech

Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells

SFPP Norwalk Pump Station, Norwalk, California

Well ID	Date Gauged	Top of Well Casing Elevation (feet msl)	Measured Depth to Groundwater (feet btoc)	Measured Depth to Product (feet btoc)	Apparent Product Thickness (feet)	Corrected Groundwater Elevation (feet msl)	Gauged By
	8/13/2014	78.27	34.89	33.95	0.94	44.13	Blaine Tech
	8/19/2014	78.27	34.90	33.94	0.96	44.14	Blaine Tech
	8/29/2014	78.27	35.65	35.38	0.27	42.84	Blaine Tech
	10/27/2014	78.27	35.82	---	---	42.45	Blaine Tech
	4/20/2015	78.27	36.63	34.12	2.51	43.65	Blaine Tech
	10/19/2015	78.27	37.90	34.87	3.03	42.79	Blaine Tech
	11/17/2015	78.27	37.71	35.36	2.35	42.44	Kinder Morgan
	3/14/2016	78.27	39.70	---	---	38.57	Blaine Tech
	4/11/2016	78.27	37.24	---	---	41.03	Blaine Tech
	6/29/2016	78.27	38.70	---	---	39.57	Blaine Tech
MW-SF-16	8/14/2007	78.21	27.68	---	---	50.53	Geomatrix
	8/21/2007	78.21	27.33	---	---	50.88	Geomatrix
	8/28/2007	78.21	27.51	---	---	50.70	Stantec
	9/11/2007	78.21	27.59	---	---	50.62	Geomatrix
	10/5/2007	78.21	28.10	---	---	50.11	Geomatrix
	11/2/2007	78.21	29.81	---	---	48.40	Geomatrix
	11/12/2007	78.21	28.40	---	---	49.81	Stantec
	8/15/2008	78.21	29.36	---	---	48.85	Envent
	10/17/2008	78.21	29.51	---	---	48.70	Envent
	12/18/2008	78.21	30.94	---	---	47.27	Envent
	1/15/2009	78.21	30.01	30.00	0.01	48.21	Envent
	3/24/2009	78.21	29.82	---	---	48.39	Envent
	4/21/2009	78.21	29.60	---	---	48.61	Envent
	7/21/2009	78.21	30.36	---	---	47.85	Envent
	10/19/2009	78.21	NM	---	---	NC	Blaine Tech
	11/4/2009	78.21	30.58	---	---	47.63	Kinder Morgan
	2/4/2010	78.21	30.36	---	---	47.85	Kinder Morgan
	9/3/2010	78.21	30.25	---	---	47.96	Kinder Morgan
	10/4/2010	78.21	30.49	---	---	47.72	Blaine Tech
	4/12/2011	78.21	29.52	---	---	48.69	Blaine Tech
	10/10/2011	78.21	29.85	---	---	48.36	Blaine Tech
	4/16/2012	78.21	NM	---	---	NC	Blaine Tech
	7/9/2012	78.21	NM	---	---	NC	Blaine Tech
	10/15/2012	78.21	32.47	---	---	45.74	Blaine Tech
	4/8/2013	78.21	32.97	32.73	0.24	45.43	Blaine Tech
	5/24/2013	78.21	32.97	32.73	0.24	45.43	Blaine Tech
	10/7/2013	78.21	NM	---	---	NC	Blaine Tech
	11/14/2013	78.21	33.80	33.21	0.59	44.88	Blaine Tech
	4/18/2014	78.21	34.20	33.65	0.55	44.45	Blaine Tech
	8/8/2014	78.21	34.06	34.05	0.01	44.16	Blaine Tech
	10/27/2014	78.21	34.25	---	---	43.96	Blaine Tech
	4/20/2015	78.21	34.52	---	---	43.69	Blaine Tech
	6/8/2015	78.21	35.17	35.00	0.17	43.18	Blaine Tech
	10/21/2015	78.21	34.56	---	---	43.65	Kinder Morgan
	3/14/2016	78.21	39.60	---	---	38.61	Blaine Tech
	4/11/2016	78.21	37.15	---	---	41.06	Blaine Tech
	6/29/2016	78.21	38.35	---	---	39.86	Blaine Tech

Notes:

Corrected groundwater elevations are based on specific gravity data collected during baildown testing, or a default value of 0.8 was used for wells not tested.

--- = not detected or not applicable

DRY = No measurable water observed in the well.

feet btoc = feet below top of casing

feet msl = feet above mean sea level based on National Geodetic Vertical Datum of 1929

NC = not calculated

NM = not measured

Figures

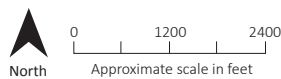
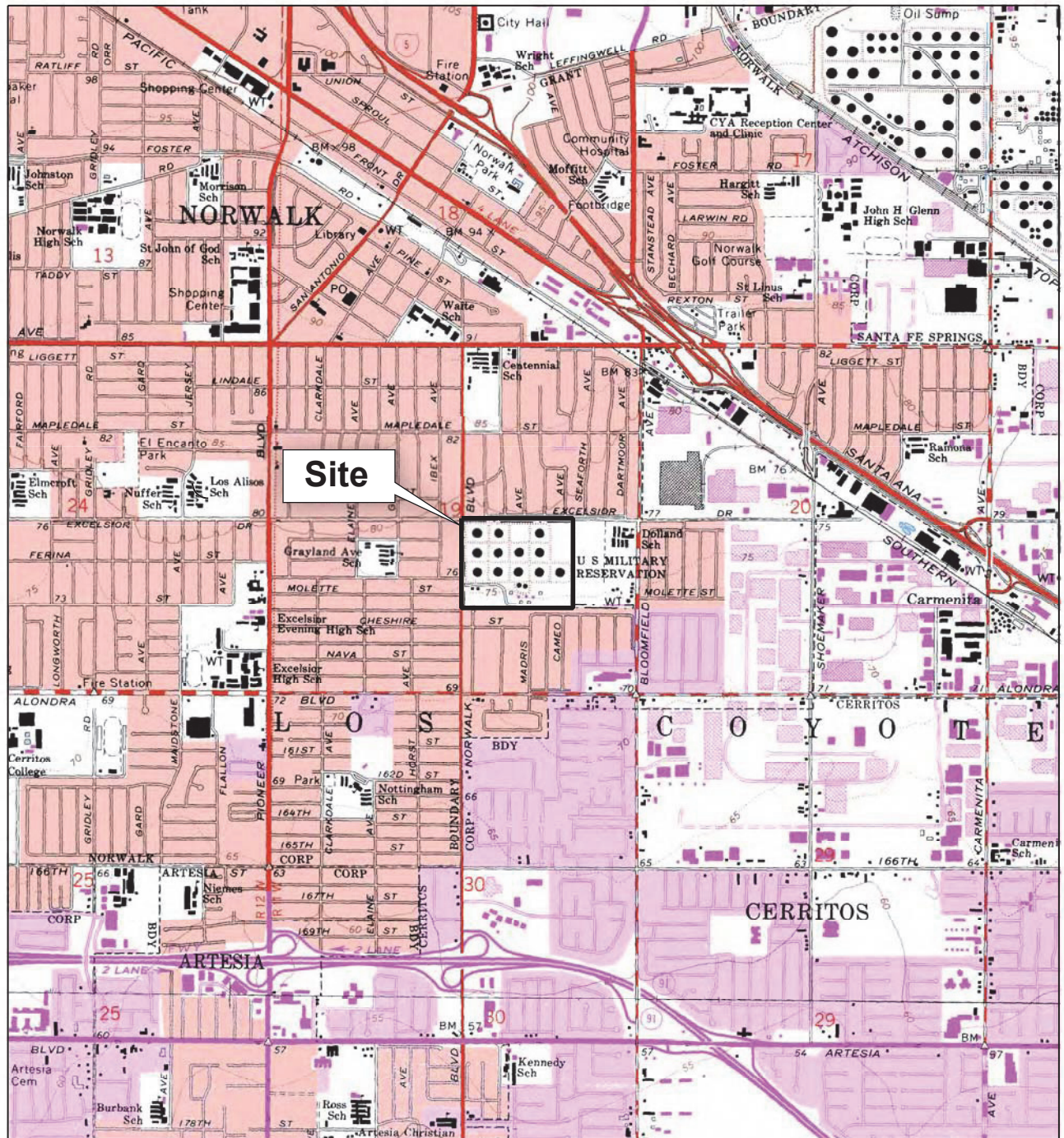
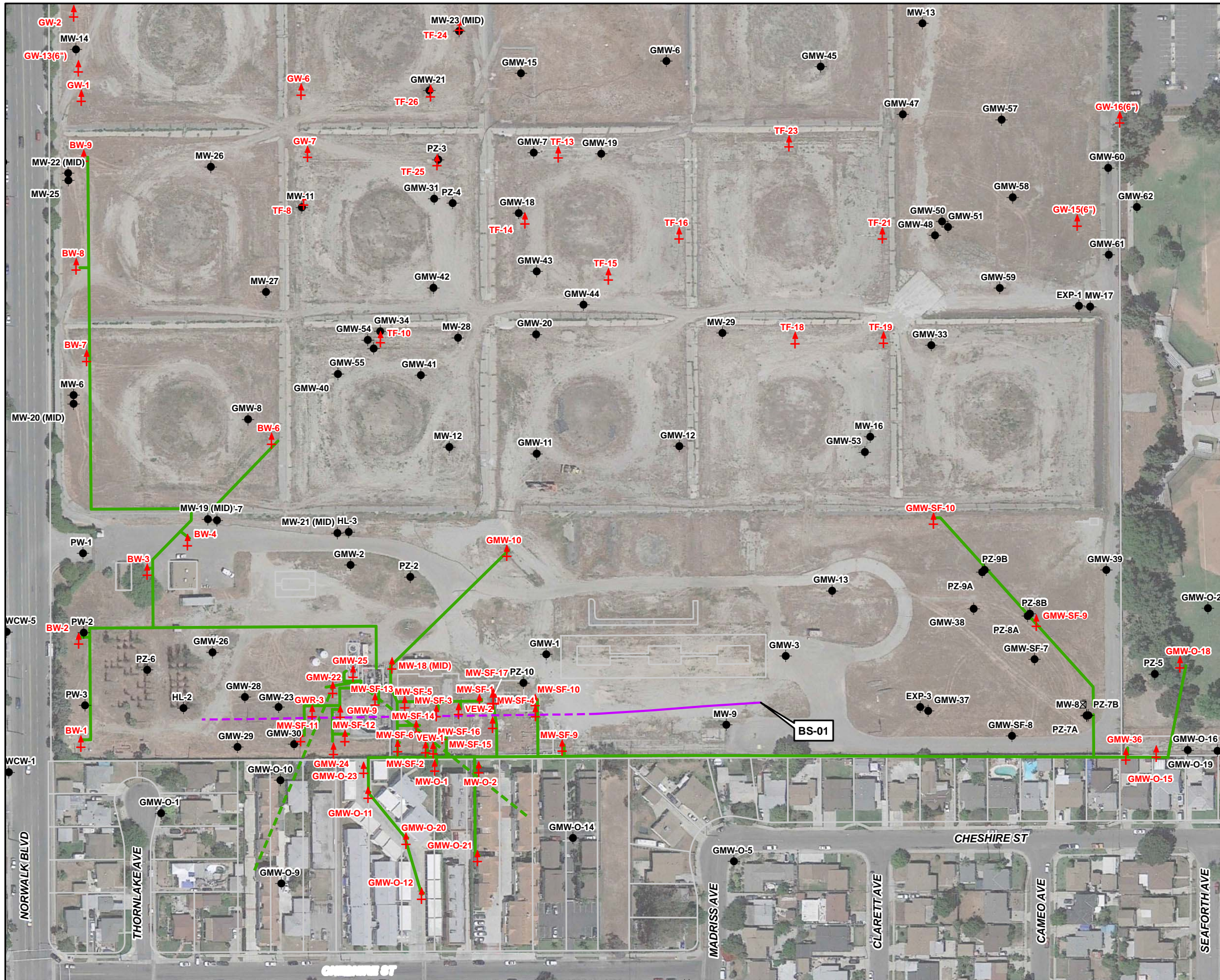


Figure 1
Site Location Map
SFP Norwalk Pump Station
Norwalk, California

BASEMAP MODIFIED FROM U.S.G.S. 7.5 MINUTE QUADRANGLE MAP
 LOS ALAMITOS 1964, CALIFORNIA. PHOTO-REVISED 1981.
 WHITTIER 1965, CALIFORNIA. PHOTO-REVISED 1981.



Legend

- Existing Groundwater Monitoring Well
- ⊕ Existing Remediation Well
- Horizontal Biosparge Well
(dashed line depicts approximate lateral extent of well screen)
- KMEP Remediation Piping Layout
(above ground and below ground)
- - - Horizontal Vapor Extraction Well Piping

Imagery Source:
Google Earth April 17, 2013.

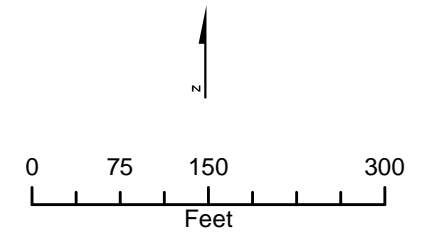


Figure 2
Remediation System Layout
SFPP Norwalk Pump Station
Norwalk, California



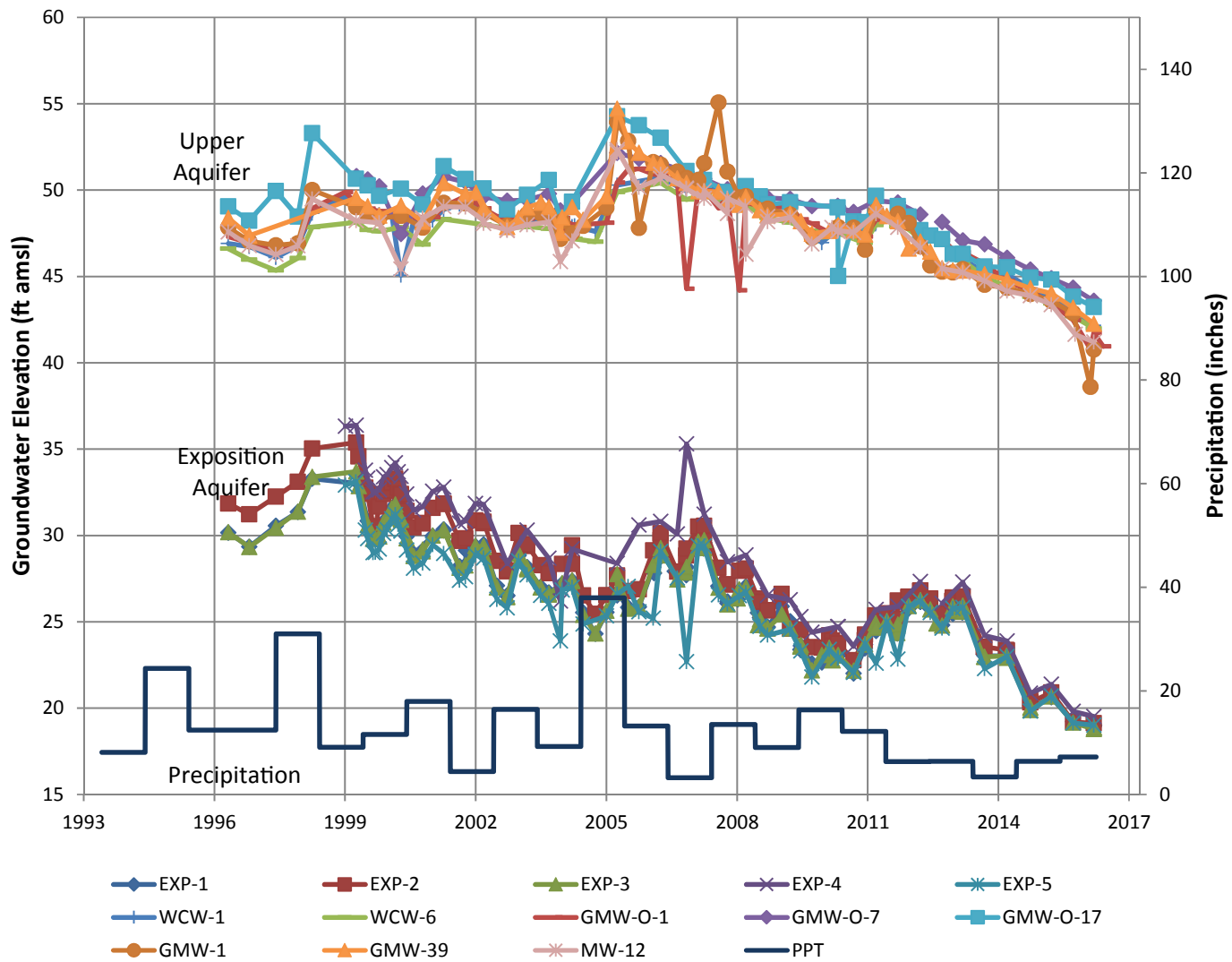


Figure 3
Hydrographs for Select Groundwater Monitoring Wells
SFPP Norwalk Pump Station
Norwalk, California



Appendix A
Laboratory Analytical Reports



April 14, 2016

CH2M HILL
ATTN: Daniel Jablonski
5742 Costello Ave.
Van Nuys, CA 91401



ADE-1461
EPA Methods TO3,
TO14A, TO15 SIM & SCAN
ASTM D1946



LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C,
RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA013332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

LABORATORY TEST RESULTS

Project Reference: SFPP - Norwalk Site
Lab Number: H040603-01/04

Enclosed are results for sample(s) received 4/06/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Dan Jablonski, Vidal Cortes and Steve Defibaugh on 4/13/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com




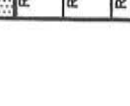

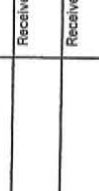
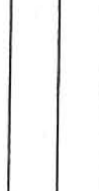
Note: The cover letter is an integral part of this analytical report.

1040003-01/04

Air Technology Laboratories, Inc.
 18501 Gale Ave # 130
 City of Industry, CA 91748
 Tel: (626) 964-4032
 Joann De La Ossa (JDeLaOssa@airtechlabs.com)

CHAIN OF CUSTODY RECORD

DATE: 4/5/16
 PAGE: 1 OF 1

LABORATORY CLIENT: CH2M HILL: Attn - Dan Jablonski ADDRESS: 6 Hutton Centre Dr, Suite 700 CITY: Santa Ana, CA 92707 TEL: 714-429-2020 FAX: _____ E-MAIL: Dan.Jablonski@CH2M.com TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL / / SPECIAL INSTRUCTIONS Report: Jablonski, Daniel/LAC - Daniel.Jablonski@CH2M.com, Cortes, Vidal/ISCO - Vidal.Cortes@CH2M.com CC: KIMEP Steve Defibaugh - Steve_Defibaugh@kindermorgan.com "J" flags required/Use lowest possible detection limit - all methods.		CLIENT PROJECT NAME / NUMBER: SPPP - Norwalk Site PROJECT CONTACT: James Dye SAMPLER(S): (SIGNATURE) 		P.O. NO.: _____ QUOTE NO.: _____ LAB USE ONLY: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
REQUESTED ANALYSIS					
TO-3 (TPH-g, TPH-d, TPH as hexane) <input checked="" type="checkbox"/>		TO-15 (VOCs Target Analytes) <input checked="" type="checkbox"/>		ASTM-D 1946 (O2/Argon, CO2, CH4, N2) <input type="checkbox"/>	
LAB USE ONLY: <input type="checkbox"/>		SAMPLE ID VEFF-04-05 VEFF-04-15-D VPOST-04-05 VINP-04-05		LOCATION/ DESCRIPTION Outlet (stack) Outlet (stack) Dup Post-Dilution Influent Vapor (header)	
DATE 4/5/16 4/5/16 4/5/16 4/5/16		TIME 1254 1254 1400 1100		INITIAL PRESSURE ("Hg) -30 -30 -30 -30	
FINAL PRESSURE ("Hg) -10 -10 -5 -5		MAT-RIX Air Air Air Air		NO. OF CONT. 1 1 1 1	
Comments Individually Certified 1-L SUMMA Individually Certified 1-L SUMMA Individually Certified 1-L SUMMA Batch Certified 1-L SUMMA TAL includes historical VOCs and remaining ATLI List per subcontract.					
Relinquished by: (Signature) 					
Relinquished by: (Signature) 					
Relinquished by: (Signature) 					
Date: 4/6/16 Time: 1137		Received by: (Signature)  Received by: (Signature)  Received by: (Signature) 			
Revised: 06/29/2015					

Client: CH2M Hill
 Attn: Daniel Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 04/06/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H040603-01			H040603-02			H040603-03			H040603-04		
Client Sample I.D.:	VEFF-04-05			VEFF-04-05-D			VPOST-04-05			VINP-04-05		
Date/Time Sampled:	4/5/16 12:54			4/5/16 12:54			4/5/16 14:00			4/5/16 14:10		
Date/Time Analyzed:	4/11/16 17:37			4/11/16 18:16			4/11/16 13:42			4/11/16 14:21		
QC Batch No.:	160411MS2A1			160411MS2A1			160411MS2A1			160411MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	3.4			3.4			95			63		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Dichlorodifluoromethane (12)	ND	0.0034	0.00052	ND	0.0034	0.00052	ND	0.095	0.015	ND	0.063	0.0097
Chloromethane	ND	0.0067	0.00074	ND	0.0067	0.00074	ND	0.19	0.021	ND	0.13	0.014
1,2-CI-1,1,2,2-F ethane (114)	ND	0.0034	0.00068	ND	0.0034	0.00068	ND	0.095	0.019	ND	0.063	0.013
Vinyl Chloride	ND	0.0034	0.00055	ND	0.0034	0.00055	ND	0.095	0.015	ND	0.063	0.010
Bromomethane	ND	0.0084	0.00099	ND	0.0084	0.00099	0.031 J	0.24	0.028	ND	0.16	0.019
Chloroethane	ND	0.0034	0.0028	ND	0.0034	0.0028	ND	0.095	0.080	ND	0.063	0.053
Trichlorofluoromethane (11)	ND	0.0034	0.00073	ND	0.0034	0.00073	ND	0.095	0.020	ND	0.063	0.014
1,1-Dichloroethene	ND	0.0034	0.00076	ND	0.0034	0.00076	ND	0.095	0.022	ND	0.063	0.014
Carbon Disulfide	0.062	0.017	0.00081	0.36	0.017	0.00081	0.13 J	0.47	0.023	ND	0.32	0.015
1,1,2-CI 1,2,2-F ethane (113)	ND	0.0034	0.00091	ND	0.0034	0.00091	ND	0.095	0.025	ND	0.063	0.017
Acetone	0.031	0.017	0.00097	0.014 J	0.017	0.00097	ND	0.47	0.027	ND	0.32	0.018
Methylene Chloride	ND	0.0034	0.00096	ND	0.0034	0.00096	ND	0.095	0.027	ND	0.063	0.018
t-1,2-Dichloroethene	ND	0.0034	0.0010	ND	0.0034	0.0010	ND	0.095	0.028	ND	0.063	0.019
1,1-Dichloroethane	ND	0.0034	0.00046	ND	0.0034	0.00046	0.027 J	0.095	0.013	ND	0.063	0.0086
c-1,2-Dichloroethene	ND	0.0034	0.00065	ND	0.0034	0.00065	ND	0.095	0.018	ND	0.063	0.012
2-Butanone	0.013	0.0034	0.0021	0.0051	0.0034	0.0021	ND	0.095	0.059	ND	0.063	0.039
t-Butyl Methyl Ether (MTBE)	ND	0.0034	0.00075	ND	0.0034	0.00075	ND	0.095	0.021	ND	0.063	0.014
Chloroform	ND	0.0034	0.00047	ND	0.0034	0.00047	ND	0.095	0.013	ND	0.063	0.0088
1,1,1-Trichloroethane	ND	0.0034	0.00034	ND	0.0034	0.00034	ND	0.095	0.0095	ND	0.063	0.0063
Carbon Tetrachloride	ND	0.0034	0.00059	ND	0.0034	0.00059	ND	0.095	0.016	ND	0.063	0.011
Benzene	0.00067 J	0.0034	0.00032	0.00067 J	0.0034	0.00032	6.6	0.095	0.0091	3.9	0.063	0.0061
1,2-Dichloroethane	ND	0.0034	0.00025	ND	0.0034	0.00025	ND	0.095	0.0070	ND	0.063	0.0047
Trichloroethene	ND	0.0034	0.00048	ND	0.0034	0.00048	ND	0.095	0.013	ND	0.063	0.0089
1,2-Dichloropropane	ND	0.0034	0.00061	ND	0.0034	0.00061	ND	0.095	0.017	ND	0.063	0.011
Bromodichloromethane	ND	0.0034	0.00020	ND	0.0034	0.00020	ND	0.095	0.0057	ND	0.063	0.0038
c-1,3-Dichloropropene	ND	0.0034	0.00040	ND	0.0034	0.00040	ND	0.095	0.011	ND	0.063	0.0076
4-Methyl-2-Pentanone	ND	0.0034	0.00023	ND	0.0034	0.00023	ND	0.095	0.0064	ND	0.063	0.0043
Toluene	0.00067 J	0.0034	0.00027	0.00061 J	0.0034	0.00027	14	0.095	0.0075	7.3	0.063	0.0050
t-1,3-Dichloropropene	ND	0.0034	0.00035	ND	0.0034	0.00035	ND	0.095	0.0098	ND	0.063	0.0065
1,1,2-Trichloroethane	ND	0.0034	0.00054	ND	0.0034	0.00054	ND	0.095	0.015	ND	0.063	0.010
1,3-Dichloropropane	ND	0.0034	0.00017	ND	0.0034	0.00017	ND	0.095	0.0047	ND	0.063	0.0031
Tetrachloroethene	ND	0.0034	0.00040	ND	0.0034	0.00040	ND	0.095	0.011	ND	0.063	0.0076
2-Hexanone	ND	0.0034	0.00069	ND	0.0034	0.00069	ND	0.095	0.020	ND	0.063	0.013
Dibromochloromethane	ND	0.0034	0.00061	ND	0.0034	0.00061	ND	0.095	0.017	ND	0.063	0.012
1,2-Dibromoethane	ND	0.0034	0.00031	ND	0.0034	0.00031	ND	0.095	0.0086	ND	0.063	0.0058
Chlorobenzene	ND	0.0034	0.00026	ND	0.0034	0.00026	ND	0.095	0.0074	ND	0.063	0.0049
Ethylbenzene	ND	0.0034	0.00019	ND	0.0034	0.00019	1.3	0.095	0.0054	0.55	0.063	0.0036
p,&m-Xylene	0.00080 J	0.0034	0.00038	0.00085 J	0.0034	0.00038	8.4	0.095	0.011	3.3	0.063	0.0071
o-Xylene	ND	0.0034	0.00041	ND	0.0034	0.00041	3.4	0.095	0.011	1.3	0.063	0.0077



Client: CH2M Hill
 Attn: Daniel Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 04/06/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H040603-01			H040603-02			H040603-03			H040603-04		
Client Sample I.D.:	VEFF-04-05			VEFF-04-05-D			VPOST-04-05			VINP-04-05		
Date/Time Sampled:	4/5/16 12:54			4/5/16 12:54			4/5/16 14:00			4/5/16 14:10		
Date/Time Analyzed:	4/11/16 17:37			4/11/16 18:16			4/11/16 13:42			4/11/16 14:21		
QC Batch No.:	160411MS2A1			160411MS2A1			160411MS2A1			160411MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	3.4			3.4			95			63		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Styrene	ND	0.0034	0.00043	ND	0.0034	0.00043	0.14	0.095	0.012	0.050 J	0.063	0.0081
Bromoform	ND	0.0034	0.00019	ND	0.0034	0.00019	ND	0.095	0.0053	ND	0.063	0.0035
Isopropyl benzene	ND	0.0034	0.00035	ND	0.0034	0.00035	0.073 J	0.095	0.0099	0.027 J	0.063	0.0066
1,1,2,2-Tetrachloroethane	ND	0.0067	0.00021	ND	0.0067	0.00021	ND	0.19	0.0058	ND	0.13	0.0039
Benzyl Chloride	ND	0.0034	0.00062	ND	0.0034	0.00062	ND	0.095	0.017	ND	0.063	0.012
1,2,3-Trichloropropane	ND	0.0034	0.00091	ND	0.0034	0.00091	ND	0.095	0.025	ND	0.063	0.017
n-Propyl Benzene	ND	0.0034	0.00020	ND	0.0034	0.00020	0.12	0.095	0.0055	0.031 J	0.063	0.0037
4-Ethyl Toluene	ND	0.0034	0.00021	ND	0.0034	0.00021	1.3	0.095	0.0060	0.27	0.063	0.0040
1,3,5-Trimethylbenzene	ND	0.0067	0.00058	ND	0.0067	0.00058	0.58	0.19	0.016	0.10 J	0.13	0.011
4-Chlorotoluene	ND	0.0034	0.00040	ND	0.0034	0.00040	ND	0.095	0.011	ND	0.063	0.0075
tert-Butylbenzene	ND	0.0034	0.00031	ND	0.0034	0.00031	ND	0.095	0.0086	ND	0.063	0.0057
1,2,4-Trimethylbenzene	ND	0.0067	0.00038	ND	0.0067	0.00038	0.79	0.19	0.011	0.10 J	0.13	0.0072
sec-Butylbenzene	ND	0.0034	0.00033	ND	0.0034	0.00033	0.015 J	0.095	0.0092	ND	0.063	0.0061
p-Isopropyltoluene	0.00083 J	0.0034	0.00044	0.00076 J	0.0034	0.00044	0.016 J	0.095	0.012	ND	0.063	0.0082
1,3-Dichlorobenzene	ND	0.0034	0.00041	ND	0.0034	0.00041	ND	0.095	0.011	ND	0.063	0.0077
1,4-Dichlorobenzene	ND	0.0034	0.00049	ND	0.0034	0.00049	ND	0.095	0.014	ND	0.063	0.0092
n-Butylbenzene	ND	0.0034	0.00025	ND	0.0034	0.00025	ND	0.095	0.0069	ND	0.063	0.0046
1,2-Dichlorobenzene	ND	0.0034	0.00042	ND	0.0034	0.00042	ND	0.095	0.012	ND	0.063	0.0079
1,2,4-Trichlorobenzene	ND	0.0067	0.00056	ND	0.0067	0.00056	ND	0.19	0.016	ND	0.13	0.010
Hexachlorobutadiene	ND	0.0034	0.00020	ND	0.0034	0.00020	ND	0.095	0.0056	ND	0.063	0.0037
t-Butanol	ND	0.017	0.00065	ND	0.017	0.00065	ND	0.47	0.018	ND	0.32	0.012
n-Hexane	ND	0.017	0.00045	ND	0.017	0.00045	23	0.47	0.013	14	0.32	0.0085
Isopropyl ether	ND	0.017	0.00037	ND	0.017	0.00037	ND	0.47	0.011	ND	0.32	0.0070
t-Butyl ethyl ether	ND	0.017	0.00067	ND	0.017	0.00067	ND	0.47	0.019	ND	0.32	0.013
2,2-Dichloropropane	ND	0.017	0.00032	ND	0.017	0.00032	ND	0.47	0.0090	ND	0.32	0.0060
t-Amyl methyl ether	ND	0.017	0.00024	ND	0.017	0.00024	ND	0.47	0.0067	ND	0.32	0.0045
1,4-Dioxane	ND	0.017	0.00059	ND	0.017	0.00059	ND	0.47	0.017	ND	0.32	0.011
Naphthalene	ND	0.017	0.0013	ND	0.017	0.0013	ND	0.47	0.036	ND	0.32	0.024
1,2,3-Trichlorobenzene (TIC)	ND	--	--	ND	--	--	ND	--	--	ND	--	--

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: Mark Johnson
 Operations Manager

Date: 4/13/16

The cover letter is an integral part of this analytical report



Client: CH2M Hill
 Attn: Daniel Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 04/06/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK																			
Client Sample I.D.:	-																			
Date/Time Sampled:	-																			
Date/Time Analyzed:	4/11/16 11:43																			
QC Batch No.:	160411MS2A1																			
Analyst Initials:	DT																			
Dilution Factor:	0.20																			
ANALYTE	Result ppmv	RL ppmv	MDL ppmv																	
Dichlorodifluoromethane (12)	ND	0.00020	0.000031																	
Chloromethane	ND	0.00040	0.000044																	
1,2-CI-1,1,2,2-F ethane (114)	ND	0.00020	0.000040																	
Vinyl Chloride	ND	0.00020	0.000032																	
Bromomethane	0.000087 J	0.00050	0.000059																	
Chloroethane	ND	0.00020	0.00017																	
Trichlorofluoromethane (11)	ND	0.00020	0.000043																	
1,1-Dichloroethene	ND	0.00020	0.000045																	
Carbon Disulfide	ND	0.0010	0.000048																	
1,1,2-CI 1,2,2-F ethane (113)	ND	0.00020	0.000054																	
Acetone	0.00011 J	0.0010	0.000058																	
Methylene Chloride	ND	0.00020	0.000057																	
t-1,2-Dichloroethene	ND	0.00020	0.000060																	
1,1-Dichloroethane	ND	0.00020	0.000027																	
c-1,2-Dichloroethene	ND	0.00020	0.000039																	
2-Butanone	ND	0.00020	0.00012																	
t-Butyl Methyl Ether (MTBE)	ND	0.00020	0.000045																	
Chloroform	ND	0.00020	0.000028																	
1,1,1-Trichloroethane	ND	0.00020	0.000020																	
Carbon Tetrachloride	ND	0.00020	0.000035																	
Benzene	0.000020 J	0.00020	0.000019																	
1,2-Dichloroethane	ND	0.00020	0.000015																	
Trichloroethene	ND	0.00020	0.000028																	
1,2-Dichloropropane	ND	0.00020	0.000036																	
Bromodichloromethane	ND	0.00020	0.000012																	
c-1,3-Dichloropropene	ND	0.00020	0.000024																	
4-Methyl-2-Pentanone	ND	0.00020	0.000013																	
Toluene	ND	0.00020	0.000016																	
t-1,3-Dichloropropene	ND	0.00020	0.000021																	
1,1,2-Trichloroethane	ND	0.00020	0.000032																	
1,3-Dichloropropane	ND	0.00020	0.0000099																	
Tetrachloroethene	ND	0.00020	0.000024																	
2-Hexanone	ND	0.00020	0.000041																	
Dibromochloromethane	ND	0.00020	0.000036																	
1,2-Dibromoethane	ND	0.00020	0.000018																	
Chlorobenzene	ND	0.00020	0.000016																	
Ethylbenzene	ND	0.00020	0.000011																	
p,&m-Xylene	ND	0.00020	0.000023																	
o-Xylene	ND	0.00020	0.000024																	



Client: CH2M Hill
 Attn: Daniel Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 04/06/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK														
Client Sample I.D.:	-														
Date/Time Sampled:	-														
Date/Time Analyzed:	4/11/16 11:43														
QC Batch No.:	16041IMS2A1														
Analyst Initials:	DT														
Dilution Factor:	0.20														
ANALYTE	Result ppmv	RL ppmv	MDL ppmv												
Styrene	ND	0.00020	0.000026												
Bromoform	ND	0.00020	0.000011												
Isopropyl benzene	ND	0.00020	0.000021												
1,1,2,2-Tetrachloroethane	ND	0.00040	0.000012												
Benzyl Chloride	ND	0.00020	0.000037												
1,2,3-Trichloropropane	ND	0.00020	0.000054												
n-Propyl Benzene	ND	0.00020	0.000012												
4-Ethyl Toluene	ND	0.00020	0.000013												
1,3,5-Trimethylbenzene	ND	0.00040	0.000035												
4-Chlorotoluene	ND	0.00020	0.000024												
tert-Butylbenzene	ND	0.00020	0.000018												
1,2,4-Trimethylbenzene	ND	0.00040	0.000023												
sec-Butylbenzene	ND	0.00020	0.000019												
p-Isopropyltoluene	ND	0.00020	0.000026												
1,3-Dichlorobenzene	ND	0.00020	0.000024												
1,4-Dichlorobenzene	ND	0.00020	0.000029												
n-Butylbenzene	ND	0.00020	0.000015												
1,2-Dichlorobenzene	ND	0.00020	0.000025												
1,2,4-Trichlorobenzene	ND	0.00040	0.000033												
Hexachlorobutadiene	ND	0.00020	0.000012												
t-Butanol	ND	0.0010	0.000038												
n-Hexane	ND	0.0010	0.000027												
Isopropyl ether	ND	0.0010	0.000022												
t-Butyl ethyl ether	ND	0.0010	0.000040												
2,2-Dichloropropane	ND	0.0010	0.000019												
t-Amyl methyl ether	ND	0.0010	0.000014												
1,4-Dioxane	ND	0.0010	0.000035												
Naphthalene	ND	0.0010	0.000077												
1,2,3-Trichlorobenzene (TIC)	ND	--	--												

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date 4/13/16

The cover letter is an integral part of this analytical report



LCS/LCSD Recovery and RPD Summary Report


QC Batch #: 160411MS2A1

Matrix: Air

EPA Method TO-14/TO-15

Lab No:		Method Blank	LCS		LCSD						
Date/Time Analyzed:		4/11/16 11:43	4/11/16 10:43		4/11/16 12:23						
Data File ID:		11APR005.D	11APR004.D		11APR006.D						
Analyst Initials:		DT	DT		DT						
Dilution Factor:		0.2	1.0		1.0		Limits				
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/Fail
1,1-Dichloroethene	0.0	10.0	10.8	108	10.5	105	3.0	70	130	30	Pass
Methylene Chloride	0.0	10.0	10.5	105	10.3	103	2.2	70	130	30	Pass
Trichloroethene	0.0	10.0	10.5	105	10.2	102	2.9	70	130	30	Pass
Toluene	0.0	10.0	9.5	95	9.5	95	0.8	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	8.8	88	8.7	87	2.0	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: _____  _____
Mark Johnson
Operations Manager

Date: 4/13/16

The cover letter is an integral part of this analytical report



Client: CH2M Hill
 Attn: Daniel Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 04/06/16
 Matrix: Air
 Reporting Units: ppmv

EPA METHOD TO3

Lab No.:	H040603-01	H040603-02	H040603-03	H040603-04								
Client Sample I.D.:	VEFF-04-05	VEFF-04-05-D	VPOST-04-05	VINF-04-05								
Date/Time Sampled:	4/5/16 12:54	4/5/16 12:54	4/5/16 14:00	4/5/16 14:10								
Date/Time Analyzed:	4/11/16 10:36	4/11/16 11:00	4/11/16 12:55	4/11/16 14:04								
QC Batch No.:	160411GC11A1	160411GC11A1	160411GC11A1	160411GC11A1								
Analyst Initials:	AS	AS	AS	AS								
Dilution Factor:	3.4	3.4	17	3.2								
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
TVOC as Hexane	ND	3.4	0.59	ND	3.4	0.59	760	17	3.0	400	3.2	0.55

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: Mark Johnson
 Operations Manager

Date 4/13/16

The cover letter is an integral part of this analytical report



QC Batch No: 160411GC11A1

Matrix: Air

Reporting Units: ppmv

EPA METHOD TO3
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK			LCS		LCSD					
Date Analyzed:	4/11/16 10:13			4/11/16 9:28		4/11/16 9:51					
Analyst Initials:	AS			AS		AS					
Dilution Factor:	1.0			1.0		1.0					
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	% Rec.	Result ppmv	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
TVOC as Hexane	ND	1.0	0.18	5.05	101	4.96	99	1.8	70	130	25

MDL = Method Detection Limit

ND= Not Detected (below MDL)

RL = Reporting Limit

J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: Mark Johnson
Mark Johnson
Operations Manager

Date 4/17/16

The cover letter is an integral part of this analytical report.



Client: CH2M Hill
 Attn: Daniel Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 04/06/16
 Matrix: Air
 Reporting Units: % v/v

ASTM D1946							
Lab No.:	H040603-04						
Client Sample I.D.:	VINF-04-05						
Date/Time Sampled:	4/5/16 14:10						
Date/Time Analyzed:	4/7/16 22:37						
QC Batch No.:	160407GC8A1						
Analyst Initials:	AS						
Dilution Factor:	3.2						
ANALYTE	Result % v/v	RL % v/v					
Carbon Dioxide	0.49	0.032					
Oxygen/Argon	21	1.6					
Nitrogen	78	3.2					
Methane	0.033	0.0032					

Results normalized including non-methane hydrocarbons
 ND = Not Detected (below RL)
 RL = Reporting Limit

Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date: 4/13/16

The cover letter is an integral part of this analytical report



QC Batch No.: 160407GC8A1

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank	LCS	LCS	LCS	LCS	LCS	LCS	LCS
Date/Time Analyzed:	4/7/16 11:07	4/7/16 9:30	4/7/16 9:30	4/7/16 9:30	4/7/16 9:30	4/7/16 9:30	4/7/16 9:30	4/7/16 9:30
Analyst Initials:	AS	AS	AS	AS	AS	AS	AS	AS
Datafile:	07apr010	07apr006	07apr006	07apr006	07apr006	07apr006	07apr006	07apr006
Dilution Factor:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Carbon Dioxide	ND	0.010	98	70-130%	98	70-130%	0.2	<30
Oxygen/Argon	ND	0.50	102	70-130%	101	70-130%	0.4	<30
Nitrogen	ND	1.0	102	70-130%	102	70-130%	0.4	<30
Methane	ND	0.0010	106	70-130%	105	70-130%	1.3	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: Mark J. Johnson
Operations Manager

Date: 4/13/16

The cover letter is an integral part of this analytical report.



May 23, 2016

CH2M HILL
ATTN: Daniel Jablonski
5742 Costello Ave.
Van Nuys, CA 91401



ADE-1461
EPA Methods TO3,
TO14A, TO15 SIM & SCAN
ASTM D1946



LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C,
RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

LABORATORY TEST RESULTS

Project Reference: SFPP - Norwalk Site
Lab Number: H051602-01/04

Enclosed are results for sample(s) received 5/16/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Dan Jablonski, Vidal Cortes and Steve Defibaugh on 5/20/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

H051602-01/04
 CHAIN OF CUSTODY RECORD

Air Technology Laboratories, Inc.
 18501 Gale Ave # 130
 City of Industry, CA 91748
 Tel: (626) 964-4032
 Joann De La Ossa (JDeLaOssa@airtechlabs.com)

DATE: 5/13/16
 PAGE: 1 OF 1

LABORATORY CLIENT: CH2M HILL: Attn - Dan Jablonski		CLIENT PROJECT NAME / NUMBER: SFPP - Norwalk Site		P.O. NO.:								
ADDRESS: 6 Hutton Centre Dr, Suite 700		PROJECT CONTACT: James Dye		QUOTE NO.:								
CITY: Santa Ana, CA 92707		SAMPLER(S) (SIGNATURE):		LAB USE ONLY								
TEL: 714-429-2020		E-MAIL: <small>Original Jablonski@CH2M.HILL.COM</small>										
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS		ARCHIVE SAMPLES UNTIL: / /										
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY):		RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL: / /										
SPECIAL INSTRUCTIONS: Report: Jablonski, Daniel/LAC - Daniel.Jablonski@CH2M.com, Cortes, Vidal/SCO - Vidal.Cortes@CH2M.com CC: KWIEP Steve Defibaugh - Steve_Defibaugh@kindermorgan.com "J" flags required/Use lowest possible detection limit - all methods.		REQUESTED ANALYSIS										
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	DATE	TIME	INITIAL PRESSURE (Hg)	FINAL PRESSURE (Hg)	MAT-RIX	NO. OF CONT.	TO-3 (TPH, g, TPH, d, TPH as hexane)	TO-15 (VOCs Target Analytes)	ASTM-D 1946 (O2/Argon, CO2, CH4, N2)	Comments
	VEFF-05-13	Outlet (stack)	5/13/16	1311	-30	-5	Air	1	X	X		Individually Certified 1-L SUMMA
	VEFF-05-13-D	Outlet (stack) Dup	5/13/16	1311	-30	-5	Air	1	X	X		Individually Certified 1-L SUMMA
	VPOST-05-13	Post-Dilution	5/13/16	1311	-30	-5	Air	1	X	X		Individually Certified 1-L SUMMA
	VINF-05-13	Influent Vapor (header)	5/13/16	1317	-30	-5	Air	1	X	X		Batch Certified 1-L SUMMA
												TAL includes historical VOCs and remaining ATLI List per subcontract.
Relinquished by: (Signature)		Received by: (Signature)		Date: 5/13/16		Time: 15:30						
Relinquished by: (Signature)		Received by: (Signature)		Date: 5-16-16		Time: 12:09						
Relinquished by: (Signature)		Received by: (Signature)		Date:		Time:						

Revised: 06/29/2015

-01
 -02
 -03
 -04

Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 05/16/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H051602-01			H051602-02			H051602-03			H051602-04		
Client Sample I.D.:	VEFF-05-3			VEFF-05-3-D			VPOST-05-13			VINP-05-13		
Date/Time Sampled:	5/13/16 13:11			5/13/16 13:11			5/13/16 13:11			5/13/16 13:17		
Date/Time Analyzed:	5/18/16 17:23			5/18/16 18:02			5/18/16 18:41			5/18/16 19:20		
QC Batch No.:	160518MS2A1			160518MS2A1			160518MS2A1			160518MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	2.2			2.2			55			23		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Dichlorodifluoromethane (12)	ND	0.0022	0.00034	ND	0.0022	0.00034	ND	0.055	0.0084	ND	0.023	0.0035
Chloromethane	ND	0.0044	0.00048	ND	0.0044	0.00048	ND	0.11	0.012	ND	0.046	0.0051
1,2-CI-1,1,2,2-F ethane (114)	ND	0.0022	0.00044	ND	0.0022	0.00044	ND	0.055	0.011	ND	0.023	0.0046
Vinyl Chloride	ND	0.0022	0.00036	ND	0.0022	0.00036	ND	0.055	0.0089	ND	0.023	0.0037
Bromomethane	ND	0.0055	0.00064	ND	0.0055	0.00064	ND	0.14	0.016	ND	0.057	0.0067
Chloroethane	ND	0.0022	0.0018	ND	0.0022	0.0018	ND	0.055	0.046	ND	0.023	0.019
Trichlorofluoromethane (11)	ND	0.0022	0.00047	ND	0.0022	0.00047	ND	0.055	0.012	ND	0.023	0.0049
1,1-Dichloroethene	ND	0.0022	0.00050	ND	0.0022	0.00050	ND	0.055	0.012	ND	0.023	0.0052
Carbon Disulfide	0.070	0.011	0.00053	0.047	0.011	0.00053	0.047 J	0.27	0.013	0.036 J	0.11	0.0055
1,1,2-CI 1,2,2-F ethane (113)	ND	0.0022	0.00059	ND	0.0022	0.00059	ND	0.055	0.015	ND	0.023	0.0062
Acetone	0.014	0.011	0.00063	0.015	0.011	0.00063	ND	0.27	0.016	0.0074 J	0.11	0.0066
Methylene Chloride	ND	0.0022	0.00063	ND	0.0022	0.00063	ND	0.055	0.016	ND	0.023	0.0066
t-1,2-Dichloroethene	ND	0.0022	0.00066	ND	0.0022	0.00066	ND	0.055	0.016	ND	0.023	0.0069
1,1-Dichloroethane	ND	0.0022	0.00030	ND	0.0022	0.00030	ND	0.055	0.0075	ND	0.023	0.0031
c-1,2-Dichloroethene	ND	0.0022	0.00042	ND	0.0022	0.00042	ND	0.055	0.011	ND	0.023	0.0044
2-Butanone	0.0067	0.0022	0.0014	0.0041	0.0022	0.0014	ND	0.055	0.034	ND	0.023	0.014
t-Butyl Methyl Ether (MTBE)	ND	0.0022	0.00049	ND	0.0022	0.00049	ND	0.055	0.012	ND	0.023	0.0051
Chloroform	ND	0.0022	0.00031	ND	0.0022	0.00031	ND	0.055	0.0077	ND	0.023	0.0032
1,1,1-Trichloroethane	ND	0.0022	0.00022	ND	0.0022	0.00022	ND	0.055	0.0055	ND	0.023	0.0023
Carbon Tetrachloride	ND	0.0022	0.00038	ND	0.0022	0.00038	ND	0.055	0.0096	ND	0.023	0.0040
Benzene	0.00095 J	0.0022	0.00021	0.0010 J	0.0022	0.00021	4.1	0.055	0.0053	2.2	0.023	0.0022
1,2-Dichloroethane	ND	0.0022	0.00016	ND	0.0022	0.00016	0.016 J	0.055	0.0041	0.010 J	0.023	0.0017
Trichloroethene	ND	0.0022	0.00031	ND	0.0022	0.00031	ND	0.055	0.0078	ND	0.023	0.0033
1,2-Dichloropropane	ND	0.0022	0.00040	ND	0.0022	0.00040	ND	0.055	0.0099	ND	0.023	0.0042
Bromodichloromethane	ND	0.0022	0.00013	ND	0.0022	0.00013	ND	0.055	0.0033	ND	0.023	0.0014
c-1,3-Dichloropropene	ND	0.0022	0.00026	ND	0.0022	0.00026	ND	0.055	0.0066	ND	0.023	0.0028
4-Methyl-2-Pentanone	ND	0.0022	0.00015	ND	0.0022	0.00015	ND	0.055	0.0037	ND	0.023	0.0015
Toluene	0.0027	0.0022	0.00017	0.0023	0.0022	0.00017	9.4	0.055	0.0044	4.3	0.023	0.0018
t-1,3-Dichloropropene	ND	0.0022	0.00023	ND	0.0022	0.00023	ND	0.055	0.0057	ND	0.023	0.0024
1,1,2-Trichloroethane	ND	0.0022	0.00036	ND	0.0022	0.00036	ND	0.055	0.0089	ND	0.023	0.0037
1,3-Dichloropropane	ND	0.0022	0.00011	ND	0.0022	0.00011	ND	0.055	0.0027	ND	0.023	0.0011
Tetrachloroethene	ND	0.0022	0.00026	ND	0.0022	0.00026	ND	0.055	0.0066	ND	0.023	0.0028
2-Hexanone	ND	0.0022	0.00045	ND	0.0022	0.00045	ND	0.055	0.011	ND	0.023	0.0047
Dibromochloromethane	ND	0.0022	0.00040	ND	0.0022	0.00040	ND	0.055	0.010	ND	0.023	0.0042
1,2-Dibromoethane	ND	0.0022	0.00020	ND	0.0022	0.00020	ND	0.055	0.0050	ND	0.023	0.0021
Chlorobenzene	ND	0.0022	0.00017	ND	0.0022	0.00017	ND	0.055	0.0043	0.0078 J	0.023	0.0018
Ethylbenzene	0.00032 J	0.0022	0.00013	0.00013 J	0.0022	0.00013	0.85	0.055	0.0032	0.30	0.023	0.0013
p.&m-Xylene	0.0013 J	0.0022	0.00025	0.0014 J	0.0022	0.00025	4.9	0.055	0.0062	1.5	0.023	0.0026
o-Xylene	0.0012 J	0.0022	0.00027	0.0011 J	0.0022	0.00027	2.0	0.055	0.0067	0.54	0.023	0.0028



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 05/16/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H051602-01			H051602-02			H051602-03			H051602-04		
Client Sample I.D.:	VEFF-05-3			VEFF-05-3-D			VPOST-05-13			VINP-05-13		
Date/Time Sampled:	5/13/16 13:11			5/13/16 13:11			5/13/16 13:11			5/13/16 13:17		
Date/Time Analyzed:	5/18/16 17:23			5/18/16 18:02			5/18/16 18:41			5/18/16 19:20		
QC Batch No.:	160518MS2A1			160518MS2A1			160518MS2A1			160518MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	2.2			2.2			55			23		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Styrene	0.00056 J	0.0022	0.00028	0.00047 J	0.0022	0.00028	0.067	0.055	0.0071	0.020 J	0.023	0.0030
Bromoform	ND	0.0022	0.00012	ND	0.0022	0.00012	ND	0.055	0.0031	ND	0.023	0.0013
Isopropyl benzene	ND	0.0022	0.00023	ND	0.0022	0.00023	0.039 J	0.055	0.0057	0.012 J	0.023	0.0024
1,1,2,2-Tetrachloroethane	ND	0.0044	0.00013	ND	0.0044	0.00013	ND	0.11	0.0034	ND	0.046	0.0014
Benzyl Chloride	ND	0.0022	0.00040	ND	0.0022	0.00040	ND	0.055	0.010	ND	0.023	0.0042
1,2,3-Trichloropropane	ND	0.0022	0.00059	ND	0.0022	0.00059	ND	0.055	0.015	ND	0.023	0.0062
n-Propyl Benzene	ND	0.0022	0.00013	ND	0.0022	0.00013	0.065	0.055	0.0032	0.013 J	0.023	0.0013
4-Ethyl Toluene	0.00085 J	0.0022	0.00014	0.00097 J	0.0022	0.00014	0.52	0.055	0.0035	0.080	0.023	0.0015
1,3,5-Trimethylbenzene	ND	0.0044	0.00038	ND	0.0044	0.00038	0.21	0.11	0.0095	0.031 J	0.046	0.0040
4-Chlorotoluene	ND	0.0022	0.00026	ND	0.0022	0.00026	ND	0.055	0.0065	ND	0.023	0.0027
tert-Butylbenzene	0.00024 J	0.0022	0.00020	0.00023 J	0.0022	0.00020	0.029 J	0.055	0.0050	0.0026 J	0.023	0.0021
1,2,4-Trimethylbenzene	0.0018 J	0.0044	0.00025	0.0019 J	0.0044	0.00025	0.22	0.11	0.0062	0.022 J	0.046	0.0026
sec-Butylbenzene	ND	0.0022	0.00021	ND	0.0022	0.00021	0.0074 J	0.055	0.0053	ND	0.023	0.0022
p-Isopropyltoluene	0.0017 J	0.0022	0.00029	0.0015 J	0.0022	0.00029	0.012 J	0.055	0.0072	ND	0.023	0.0030
1,3-Dichlorobenzene	ND	0.0022	0.00027	ND	0.0022	0.00027	ND	0.055	0.0067	ND	0.023	0.0028
1,4-Dichlorobenzene	ND	0.0022	0.00032	ND	0.0022	0.00032	ND	0.055	0.0080	ND	0.023	0.0034
n-Butylbenzene	ND	0.0022	0.00016	ND	0.0022	0.00016	ND	0.055	0.0040	ND	0.023	0.0017
1,2-Dichlorobenzene	ND	0.0022	0.00027	ND	0.0022	0.00027	ND	0.055	0.0068	ND	0.023	0.0029
1,2,4-Trichlorobenzene	ND	0.0044	0.00036	ND	0.0044	0.00036	ND	0.11	0.0091	ND	0.046	0.0038
Hexachlorobutadiene	ND	0.0022	0.00013	ND	0.0022	0.00013	ND	0.055	0.0032	ND	0.023	0.0013
t-Butanol	0.0058 J	0.011	0.00042	0.0021 J	0.011	0.00042	0.034 J	0.27	0.011	0.020 J	0.11	0.0044
n-Hexane	ND	0.011	0.00030	ND	0.011	0.00030	25 d	0.77	0.021	11 d	0.40	0.011
Isopropyl ether	ND	0.011	0.00024	ND	0.011	0.00024	ND	0.27	0.0061	ND	0.11	0.0026
t-Butyl ethyl ether	ND	0.011	0.00044	ND	0.011	0.00044	ND	0.27	0.011	ND	0.11	0.0046
2,2-Dichloropropane	ND	0.011	0.00021	ND	0.011	0.00021	ND	0.27	0.0052	ND	0.11	0.0022
t-Amyl methyl ether	ND	0.011	0.00016	ND	0.011	0.00016	ND	0.27	0.0039	ND	0.11	0.0016
1,4-Dioxane	ND	0.011	0.00038	ND	0.011	0.00038	ND	0.27	0.0096	ND	0.11	0.0040
Naphthalene	0.0010 J	0.011	0.00084	0.0013 J	0.011	0.00084	ND	0.27	0.021	ND	0.11	0.0088
1,2,3-Trichlorobenzene (TIC)	ND	--	--	ND	--	--	ND	--	--	ND	--	--

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.
 d = Analyte reported from secondary dilution. Batch ID: 160519MS2A1

Reviewed/Approved By: 
 Mark Johnson
 Operations Manager

Date 5-20-16



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 05/16/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK			METHOD BLANK										
Client Sample I.D.:	-			-										
Date/Time Sampled:	-			-										
Date/Time Analyzed:	5/18/16 16:44			5/19/16 4:21										
QC Batch No.:	160518MS2A1			160519MS2A1										
Analyst Initials:	DT			DT										
Dilution Factor:	0.20			0.20										
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv								
Dichlorodifluoromethane (12)	ND	0.00020	0.000031	ND	0.00020	0.000031								
Chloromethane	ND	0.00040	0.000044	ND	0.00040	0.000044								
1,2-CI-1,1,2,2-F ethane (114)	ND	0.00020	0.000040	ND	0.00020	0.000040								
Vinyl Chloride	ND	0.00020	0.000032	ND	0.00020	0.000032								
Bromomethane	ND	0.00050	0.000059	ND	0.00050	0.000059								
Chloroethane	ND	0.00020	0.00017	ND	0.00020	0.00017								
Trichlorofluoromethane (11)	ND	0.00020	0.000043	ND	0.00020	0.000043								
1,1-Dichloroethene	ND	0.00020	0.000045	ND	0.00020	0.000045								
Carbon Disulfide	ND	0.0010	0.000048	ND	0.0010	0.000048								
1,1,2-CI 1,2,2-F ethane (113)	ND	0.00020	0.000054	ND	0.00020	0.000054								
Acetone	0.000093 J	0.0010	0.000058	0.00011 J	0.0010	0.000058								
Methylene Chloride	ND	0.00020	0.000057	ND	0.00020	0.000057								
t-1,2-Dichloroethene	ND	0.00020	0.000060	ND	0.00020	0.000060								
1,1-Dichloroethane	ND	0.00020	0.000027	ND	0.00020	0.000027								
c-1,2-Dichloroethene	ND	0.00020	0.000039	ND	0.00020	0.000039								
2-Butanone	ND	0.00020	0.00012	ND	0.00020	0.00012								
t-Butyl Methyl Ether (MTBE)	ND	0.00020	0.000045	ND	0.00020	0.000045								
Chloroform	ND	0.00020	0.000028	ND	0.00020	0.000028								
1,1,1-Trichloroethane	ND	0.00020	0.000020	ND	0.00020	0.000020								
Carbon Tetrachloride	ND	0.00020	0.000035	ND	0.00020	0.000035								
Benzene	0.000026 J	0.00020	0.000019	0.000026 J	0.00020	0.000019								
1,2-Dichloroethane	ND	0.00020	0.000015	ND	0.00020	0.000015								
Trichloroethene	ND	0.00020	0.000028	ND	0.00020	0.000028								
1,2-Dichloropropane	ND	0.00020	0.000036	ND	0.00020	0.000036								
Bromodichloromethane	ND	0.00020	0.000012	ND	0.00020	0.000012								
c-1,3-Dichloropropene	ND	0.00020	0.000024	ND	0.00020	0.000024								
4-Methyl-2-Pentanone	ND	0.00020	0.000013	ND	0.00020	0.000013								
Toluene	ND	0.00020	0.000016	ND	0.00020	0.000016								
t-1,3-Dichloropropene	ND	0.00020	0.000021	ND	0.00020	0.000021								
1,1,2-Trichloroethane	ND	0.00020	0.000032	ND	0.00020	0.000032								
1,3-Dichloropropane	ND	0.00020	0.0000099	ND	0.00020	0.0000099								
Tetrachloroethene	ND	0.00020	0.000024	ND	0.00020	0.000024								
2-Hexanone	ND	0.00020	0.000041	ND	0.00020	0.000041								
Dibromochloromethane	ND	0.00020	0.000036	ND	0.00020	0.000036								
1,2-Dibromoethane	ND	0.00020	0.000018	ND	0.00020	0.000018								
Chlorobenzene	ND	0.00020	0.000016	ND	0.00020	0.000016								
Ethylbenzene	ND	0.00020	0.000011	ND	0.00020	0.000011								
p,&m-Xylene	ND	0.00020	0.000023	ND	0.00020	0.000023								
o-Xylene	ND	0.00020	0.000024	ND	0.00020	0.000024								

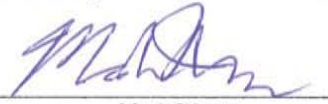


Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 05/16/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK			METHOD BLANK										
Client Sample I.D.:	-			-										
Date/Time Sampled:	-			-										
Date/Time Analyzed:	5/18/16 16:44			5/19/16 4:21										
QC Batch No.:	160518MS2A1			160519MS2A1										
Analyst Initials:	DT			DT										
Dilution Factor:	0.20			0.20										
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv								
Styrene	ND	0.00020	0.000026	ND	0.00020	0.000026								
Bromoform	ND	0.00020	0.000011	ND	0.00020	0.000011								
Isopropyl benzene	ND	0.00020	0.000021	ND	0.00020	0.000021								
1,1,2,2-Tetrachloroethane	ND	0.00040	0.000012	ND	0.00040	0.000012								
Benzyl Chloride	ND	0.00020	0.000037	ND	0.00020	0.000037								
1,2,3-Trichloropropane	ND	0.00020	0.000054	ND	0.00020	0.000054								
n-Propyl Benzene	ND	0.00020	0.000012	ND	0.00020	0.000012								
4-Ethyl Toluene	ND	0.00020	0.000013	ND	0.00020	0.000013								
1,3,5-Trimethylbenzene	ND	0.00040	0.000035	ND	0.00040	0.000035								
4-Chlorotoluene	ND	0.00020	0.000024	ND	0.00020	0.000024								
tert-Butylbenzene	ND	0.00020	0.000018	ND	0.00020	0.000018								
1,2,4-Trimethylbenzene	ND	0.00040	0.000023	ND	0.00040	0.000023								
sec-Butylbenzene	ND	0.00020	0.000019	ND	0.00020	0.000019								
p-Isopropyltoluene	ND	0.00020	0.000026	ND	0.00020	0.000026								
1,3-Dichlorobenzene	ND	0.00020	0.000024	ND	0.00020	0.000024								
1,4-Dichlorobenzene	ND	0.00020	0.000029	ND	0.00020	0.000029								
n-Butylbenzene	ND	0.00020	0.000015	ND	0.00020	0.000015								
1,2-Dichlorobenzene	ND	0.00020	0.000025	ND	0.00020	0.000025								
1,2,4-Trichlorobenzene	ND	0.00040	0.000033	ND	0.00040	0.000033								
Hexachlorobutadiene	ND	0.00020	0.000012	ND	0.00020	0.000012								
t-Butanol	ND	0.0010	0.000038	ND	0.0010	0.000038								
n-Hexane	ND	0.0010	0.000027	ND	0.0010	0.000027								
Isopropyl ether	ND	0.0010	0.000022	ND	0.0010	0.000022								
t-Butyl ethyl ether	ND	0.0010	0.000040	ND	0.0010	0.000040								
2,2-Dichloropropane	ND	0.0010	0.000019	ND	0.0010	0.000019								
t-Amyl methyl ether	ND	0.0010	0.000014	ND	0.0010	0.000014								
1,4-Dioxane	ND	0.0010	0.000035	ND	0.0010	0.000035								
Naphthalene	ND	0.0010	0.000077	ND	0.0010	0.000077								
1,2,3-Trichlorobenzene (TIC)	ND	--	--	ND	--	--								

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.
 d = Analyte reported from secondary dilution. Batch ID: 160519MS2A1

Reviewed/Approved By: 
 Mark Johnson
 Operations Manager

Date: 5-20-16



QC Batch #: 160518MS2A1

Matrix: Air

EPA Method TO-14/TO-15											
Lab No:	Method Blank		LCS		LCSD						
Date/Time Analyzed:	5/18/16 16:44		5/18/16 14:53		5/18/16 15:46						
Data File ID:	18MAY008.D		18MAY006.D		18MAY007.D						
Analyst Initials:	DT		DT		DT						
Dilution Factor:	0.2		1.0		1.0		Limits				
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/Fail
1,1-Dichloroethene	0.0	10.0	10.5	105	11.4	114	7.9	70	130	30	Pass
Methylene Chloride	0.0	10.0	10.5	105	11.3	113	7.5	70	130	30	Pass
Trichloroethene	0.0	10.0	10.4	104	11.1	111	6.4	70	130	30	Pass
Toluene	0.0	10.0	10.1	101	10.7	107	5.6	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	10.2	102	11.0	110	7.5	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: _____



Mark Johnson
Operations Manager

Date: _____

5-20-16

The cover letter is an integral part of this analytical report



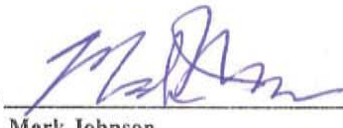
QC Batch #: 160519MS2A1

Matrix: Air

EPA Method TO-14/TO-15											
Lab No:	Method Blank		LCS		LCSD						
Date/Time Analyzed:	5/19/16 4:21		5/19/16 2:59		5/19/16 3:38						
Data File ID:	19MAY007.D		19MAY005.D		19MAY006.D						
Analyst Initials:	DT		DT		DT						
Dilution Factor:	0.2		1.0		1.0		Limits				
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/Fail
1,1-Dichloroethene	0.0	10.0	11.5	115	10.9	109	4.9	70	130	30	Pass
Methylene Chloride	0.0	10.0	10.9	109	10.9	109	0.3	70	130	30	Pass
Trichloroethene	0.0	10.0	10.3	103	10.3	103	0.4	70	130	30	Pass
Toluene	0.0	10.0	10.7	107	10.1	101	5.7	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	10.3	103	10.3	103	0.4	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: _____



Mark Johnson
Operations Manager

Date: _____

5-20-16

The cover letter is an integral part of this analytical report




Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 05/16/16
 Matrix: Air
 Reporting Units: ppmv

EPA METHOD TO3

Lab No.:	H051602-01			H051602-02			H051602-03			H051602-04		
Client Sample I.D.:	VEFF-05-3			VEFF-05-3-D			VPOST-05-13			VINP-05-13		
Date/Time Sampled:	5/13/16 13:11			5/13/16 13:11			5/13/16 13:11			5/13/16 13:17		
Date/Time Analyzed:	5/17/16 13:37			5/17/16 14:01			5/17/16 14:24			5/17/16 16:04		
QC Batch No.:	160517GC11A1			160517GC11A1			160517GC11A1			160517GC11A1		
Analyst Initials:	AS			AS			AS			AS		
Dilution Factor:	2.2			2.2			11			2.3		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
TVOC as Hexane	ND	2.2	0.39	ND	2.2	0.39	500	11	1.9	290	2.3	0.40

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: 
 Mark Johnson
 Operations Manager

Date 5-20-16

The cover letter is an integral part of this analytical report

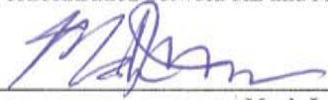


QC Batch No: 160517GC11A1
 Matrix: Air
 Reporting Units: ppmv

**EPA METHOD TO3
 LABORATORY CONTROL SAMPLE SUMMARY**

Lab No.:	METHOD BLANK	LCS	LCSD								
Date Analyzed:	5/17/16 13:12	5/17/16 12:26	5/17/16 12:49								
Analyst Initials:	AS	AS	AS								
Dilution Factor:	1.0	1.0	1.0								
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	% Rec.	Result ppmv	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
TVOC as Hexane	ND	1.0	0.18	3.68	74	3.75	75	1.9	70	130	25

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: 
 Mark Johnson
 Operations Manager

Date 5-20-16

The cover letter is an integral part of this analytical report



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 05/16/16
 Matrix: Air
 Reporting Units: % v/v

ASTM D1946			
Lab No.:	H051602-04		
Client Sample I.D.:	VINF-05-13		
Date/Time Sampled:	5/13/16 13:17		
Date/Time Analyzed:	5/19/16 10:27		
QC Batch No.:	160518GC8A2		
Analyst Initials:	AS		
Dilution Factor:	2.3		
ANALYTE	Result % v/v	RL % v/v	
Carbon Dioxide	0.50	0.023	
Oxygen/Argon	21	1.1	
Nitrogen	78	2.3	
Methane	0.0034	0.0023	

Results normalized including non-methane hydrocarbons
 ND = Not Detected (below RL)
 RL = Reporting Limit

Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date 5-20-16

The cover letter is an integral part of this analytical report.



QC Batch No.: 160518GC8A2


Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank	LCS	LCSD					
Date/Time Analyzed:	5/18/16 16:24	5/18/16 17:08	5/18/16 17:22					
Analyst Initials:	AS	AS	AS					
Datafile:	18may028	18may031	18may032					
Dilution Factor:	1.0	1.0	1.0					
ANALYTE	Results	RL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Carbon Dioxide	ND	0.010	91	70-130%	91	70-130%	0.4	<30
Oxygen/Argon	ND	0.50	100	70-130%	100	70-130%	0.4	<30
Nitrogen	ND	1.0	98	70-130%	99	70-130%	0.4	<30
Methane	ND	0.0010	113	70-130%	112	70-130%	0.9	<30

ND = Not Detected (Below RL)

Reviewed/Approved By: 
 Mark J. Johnson
 Operations Manager

Date: 5-20-16

The cover letter is an integral part of this analytical report.





June 20, 2016

CH2M HILL
ATTN: Daniel Jablonski
5742 Costello Ave.
Van Nuys, CA 91401



ADE-1461
EPA Methods TO3,
TO14A, TO15 SIM & SCAN
ASTM D1946



LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C,
RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA013332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

LABORATORY TEST RESULTS

Project Reference: SFPP - Norwalk Site
Lab Number: H060805-01/04

Enclosed are results for sample(s) received 6/08/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Dan Jablonski, Vidal Cortes and Steve Defibaugh on 6/17/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark Johnson", is written over a white background.

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

4060805-01/04

CHAIN OF CUSTODY RECORD

DATE: 6/7/16
PAGE: 1 OF 1

Air Technology Laboratories, Inc.
18501 Gale Ave # 130
City of Industry, CA 91748
Tel: (626) 964-4032
Joann De La Ossa (JDeLaOssa@airtechlabs.com)

LABORATORY CLIENT: CH2M HILL: Attn - Dan Jablonski		CLIENT PROJECT NAME / NUMBER: SFPP - Norwalk Site		P.O. NO.:					
ADDRESS: 6 Hurton Centre Dr, Suite 700		PROJECT CONTACT: James Dye		QUOTE NO.:					
CITY: Santa Ana, CA 92707		SAMPLERS (SIGNATURE): 		LAB USE ONLY: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
TEL: 714-429-2020		E-MAIL: Dan.Jablonski@CH2M.com							
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS		SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL / /							
SPECIAL INSTRUCTIONS: Report: Jablonski, Daniel/LAC - Daniel.Jablonski@CH2M.com, Cortes, Vidal/SCO - Vidal.Cortes@CH2M.com CC: KMEP Steve Defibaugh - Steve_Defibaugh@kindermorgan.com "J" flags required/Use lowest possible detection limit - all methods.		REQUESTED ANALYSIS: TO-3 (TPH, TPH4, TPH as hexane) TO-15 (VOCs Target Analytes) ASTM-D 1946 (O2/Argon, CO2, CH4, N2)							
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	DATE	TIME	INITIAL PRESSURE ("Hg)	FINAL PRESSURE ("Hg)	MAT-RIX	NO. OF CONT.	COMMENTS
	01 VEFF-06-07	Outlet (stack)	6/7/16	1117	-30	-5	Air	1	Individually Certified 1-L SUMMA
	02 VEFF-06-07-D	Outlet (stack) Dup	6/7/16	1117	-30	-5	Air	1	Individually Certified 1-L SUMMA
	03 VPOST-06-07	Post-Dilution	6/7/16	1118	-30	-5	Air	1	Individually Certified 1-L SUMMA
	04 VINP-06-07	Influent Vapor (header)	6/7/16	1120	-30	-5	Air	1	Batch Certified 1-L SUMMA
TAL includes historical VOCs and remaining ATLI List per subcontract.									
Relinquished by: (Signature) 		Received by: (Signature) FBI EX		Date: 6/7/16		Time: 1530			
Relinquished by: (Signature) 		Received by: (Signature) (Signature)		Date: 6/8/16		Time: 1230			
Relinquished by: (Signature) 		Received by: (Signature)		Date:		Time:			

Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 06/08/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H060805-01			H060805-02			H060805-03			H060805-04		
Client Sample I.D.:	VEFF-06-07			VEFF-06-07-D			VPOST-06-07			VINP-06-07		
Date/Time Sampled:	6/7/16 11:17			6/7/16 11:17			6/7/16 11:18			6/7/16 11:20		
Date/Time Analyzed:	6/17/16 0:16			6/17/16 0:56			6/17/16 2:16			6/17/16 2:55		
QC Batch No.:	160616MS2A1			160616MS2A1			160616MS2A1			160616MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	2.5			2.5			79			36		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Dichlorodifluoromethane (12)	ND	0.0025	0.00039	ND	0.0025	0.00039	ND	0.079	0.012	ND	0.036	0.0056
Chloromethane	0.0013 J	0.0051	0.00056	ND	0.0051	0.00056	ND	0.16	0.017	ND	0.072	0.0080
1,2-CI-1,1,2,2-F ethane (114)	ND	0.0025	0.00051	ND	0.0025	0.00051	ND	0.079	0.016	ND	0.036	0.0073
Vinyl Chloride	ND	0.0025	0.00041	ND	0.0025	0.00041	ND	0.079	0.013	ND	0.036	0.0059
Bromomethane	0.0010 J	0.0063	0.00074	0.0012 J	0.0063	0.00074	0.027 J	0.20	0.023	0.013 J	0.091	0.011
Chloroethane	ND	0.0025	0.0021	ND	0.0025	0.0021	ND	0.079	0.067	ND	0.036	0.030
Trichlorofluoromethane (11)	ND	0.0025	0.00054	ND	0.0025	0.00054	ND	0.079	0.017	ND	0.036	0.0078
1,1-Dichloroethene	ND	0.0025	0.00057	ND	0.0025	0.00057	ND	0.079	0.018	ND	0.036	0.0082
Carbon Disulfide	0.15	0.013	0.00061	0.038	0.013	0.00061	0.17 J	0.40	0.019	0.036 J	0.18	0.0087
1,1,2-CI 1,2,2-F ethane (113)	ND	0.0025	0.00068	ND	0.0025	0.00068	ND	0.079	0.021	ND	0.036	0.0097
Acetone	0.049	0.013	0.00073	0.037	0.013	0.00073	ND	0.40	0.023	0.16 J	0.18	0.010
Methylene Chloride	ND	0.0025	0.00072	ND	0.0025	0.00072	ND	0.079	0.023	ND	0.036	0.010
t-1,2-Dichloroethene	ND	0.0025	0.00076	ND	0.0025	0.00076	ND	0.079	0.024	ND	0.036	0.011
1,1-Dichloroethane	ND	0.0025	0.00034	ND	0.0025	0.00034	ND	0.079	0.011	ND	0.036	0.0049
c-1,2-Dichloroethene	ND	0.0025	0.00049	ND	0.0025	0.00049	ND	0.079	0.015	ND	0.036	0.0070
2-Butanone	0.087	0.0025	0.0016	0.069	0.0025	0.0016	0.051 J	0.079	0.049	0.20	0.036	0.022
t-Butyl Methyl Ether (MTBE)	ND	0.0025	0.00056	ND	0.0025	0.00056	ND	0.079	0.018	ND	0.036	0.0081
Chloroform	ND	0.0025	0.00035	ND	0.0025	0.00035	ND	0.079	0.011	ND	0.036	0.0051
1,1,1-Trichloroethane	ND	0.0025	0.00025	ND	0.0025	0.00025	ND	0.079	0.0080	ND	0.036	0.0036
Carbon Tetrachloride	ND	0.0025	0.00044	ND	0.0025	0.00044	ND	0.079	0.014	ND	0.036	0.0063
Benzene	0.0024 J	0.0025	0.00024	0.0024 J	0.0025	0.00024	3.6	0.079	0.0076	1.0	0.036	0.0035
1,2-Dichloroethane	ND	0.0025	0.00019	ND	0.0025	0.00019	ND	0.079	0.0059	ND	0.036	0.0027
Trichloroethene	ND	0.0025	0.00036	ND	0.0025	0.00036	ND	0.079	0.011	ND	0.036	0.0051
1,2-Dichloropropane	ND	0.0025	0.00046	ND	0.0025	0.00046	0.014 J	0.079	0.014	ND	0.036	0.0066
Bromodichloromethane	ND	0.0025	0.00015	ND	0.0025	0.00015	ND	0.079	0.0048	ND	0.036	0.0022
c-1,3-Dichloropropene	ND	0.0025	0.00030	ND	0.0025	0.00030	ND	0.079	0.0095	ND	0.036	0.0043
4-Methyl-2-Pentanone	ND	0.0025	0.00017	ND	0.0025	0.00017	ND	0.079	0.0053	ND	0.036	0.0024
Toluene	0.019	0.0025	0.00020	0.016	0.0025	0.00020	7.3	0.079	0.0063	1.1	0.036	0.0029
t-1,3-Dichloropropene	ND	0.0025	0.00026	ND	0.0025	0.00026	ND	0.079	0.0082	ND	0.036	0.0037
1,1,2-Trichloroethane	ND	0.0025	0.00041	ND	0.0025	0.00041	ND	0.079	0.013	ND	0.036	0.0059
1,3-Dichloropropane	ND	0.0025	0.00013	ND	0.0025	0.00013	ND	0.079	0.0039	ND	0.036	0.0018
Tetrachloroethene	ND	0.0025	0.00030	ND	0.0025	0.00030	ND	0.079	0.0095	ND	0.036	0.0044
2-Hexanone	ND	0.0025	0.00052	ND	0.0025	0.00052	ND	0.079	0.016	ND	0.036	0.0075
Dibromochloromethane	ND	0.0025	0.00046	ND	0.0025	0.00046	ND	0.079	0.014	ND	0.036	0.0066
1,2-Dibromoethane	ND	0.0025	0.00023	ND	0.0025	0.00023	ND	0.079	0.0072	ND	0.036	0.0033
Chlorobenzene	ND	0.0025	0.00020	ND	0.0025	0.00020	ND	0.079	0.0062	ND	0.036	0.0028
Ethylbenzene	0.0020 J	0.0025	0.00015	0.0017 J	0.0025	0.00015	0.52	0.079	0.0046	0.025 J	0.036	0.0021
p,&m-Xylene	0.012	0.0025	0.00029	0.012	0.0025	0.00029	2.8	0.079	0.0090	0.091	0.036	0.0041
o-Xylene	0.0035	0.0025	0.00031	0.0035	0.0025	0.00031	1.0	0.079	0.0096	0.026 J	0.036	0.0044



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 06/08/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H060805-01			H060805-02			H060805-03			H060805-04		
Client Sample I.D.:	VEFF-06-07			VEFF-06-07-D			VPOST-06-07			VINP-06-07		
Date/Time Sampled:	6/7/16 11:17			6/7/16 11:17			6/7/16 11:18			6/7/16 11:20		
Date/Time Analyzed:	6/17/16 0:16			6/17/16 0:56			6/17/16 2:16			6/17/16 2:55		
QC Batch No.:	160616MS2A1			160616MS2A1			160616MS2A1			160616MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	2.5			2.5			79			36		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Styrene	0.00085 J	0.0025	0.00032	0.00047 J	0.0025	0.00032	0.046 J	0.079	0.010	ND	0.036	0.0047
Bromoform	ND	0.0025	0.00014	ND	0.0025	0.00014	ND	0.079	0.0044	ND	0.036	0.0020
Isopropyl benzene	ND	0.0025	0.00026	ND	0.0025	0.00026	0.026 J	0.079	0.0083	ND	0.036	0.0038
1,1,2,2-Tetrachloroethane	ND	0.0051	0.00015	ND	0.0051	0.00015	ND	0.16	0.0049	ND	0.072	0.0022
Benzyl Chloride	ND	0.0025	0.00046	ND	0.0025	0.00046	ND	0.079	0.015	ND	0.036	0.0067
1,2,3-Trichloropropane	ND	0.0025	0.00068	ND	0.0025	0.00068	ND	0.079	0.021	ND	0.036	0.0097
n-Propyl Benzene	ND	0.0025	0.00015	ND	0.0025	0.00015	0.028 J	0.079	0.0046	ND	0.036	0.0021
4-Ethyl Toluene	0.0014 J	0.0025	0.00016	0.0014 J	0.0025	0.00016	0.15	0.079	0.0050	ND	0.036	0.0023
1,3,5-Trimethylbenzene	0.00050 J	0.0051	0.00044	0.00048 J	0.0051	0.00044	0.061 J	0.16	0.014	ND	0.072	0.0063
4-Chlorotoluene	ND	0.0025	0.00030	ND	0.0025	0.00030	ND	0.079	0.0094	ND	0.036	0.0043
tert-Butylbenzene	0.00026 J	0.0025	0.00023	ND	0.0025	0.00023	ND	0.079	0.0072	ND	0.036	0.0033
1,2,4-Trimethylbenzene	0.0019 J	0.0051	0.00029	0.0020 J	0.0051	0.00029	0.049 J	0.16	0.0090	ND	0.072	0.0041
sec-Butylbenzene	ND	0.0025	0.00024	ND	0.0025	0.00024	ND	0.079	0.0077	ND	0.036	0.0035
p-Isopropyltoluene	0.012	0.0025	0.00033	0.00080 J	0.0025	0.00033	ND	0.079	0.010	ND	0.036	0.0047
1,3-Dichlorobenzene	ND	0.0025	0.00031	ND	0.0025	0.00031	ND	0.079	0.0096	ND	0.036	0.0044
1,4-Dichlorobenzene	ND	0.0025	0.00037	ND	0.0025	0.00037	ND	0.079	0.012	ND	0.036	0.0053
n-Butylbenzene	ND	0.0025	0.00018	0.00024 J	0.0025	0.00018	ND	0.079	0.0058	ND	0.036	0.0026
1,2-Dichlorobenzene	ND	0.0025	0.00031	ND	0.0025	0.00031	ND	0.079	0.0099	ND	0.036	0.0045
1,2,4-Trichlorobenzene	ND	0.0051	0.00042	ND	0.0051	0.00042	ND	0.16	0.013	ND	0.072	0.0060
Hexachlorobutadiene	ND	0.0025	0.00015	ND	0.0025	0.00015	ND	0.079	0.0047	ND	0.036	0.0021
t-Butanol	0.0025 J	0.013	0.00048	ND	0.013	0.00048	0.035 J	0.40	0.015	0.011 J	0.18	0.0070
n-Hexane	ND	0.013	0.00034	ND	0.013	0.00034	19 d	0.51	0.068	7.5	0.18	0.0049
Isopropyl ether	ND	0.013	0.00028	ND	0.013	0.00028	ND	0.40	0.0088	ND	0.18	0.0040
t-Butyl ethyl ether	ND	0.013	0.00050	ND	0.013	0.00050	ND	0.40	0.016	ND	0.18	0.0072
2,2-Dichloropropane	ND	0.013	0.00024	ND	0.013	0.00024	ND	0.40	0.0075	ND	0.18	0.0034
t-Amyl methyl ether	ND	0.013	0.00018	ND	0.013	0.00018	ND	0.40	0.0056	ND	0.18	0.0026
1,4-Dioxane	ND	0.013	0.00044	ND	0.013	0.00044	ND	0.40	0.014	ND	0.18	0.0063
Naphthalene	ND	0.013	0.00097	ND	0.013	0.00097	ND	0.40	0.030	ND	0.18	0.014
1,2,3-Trichlorobenzene (TIC)	ND	--	--	ND	--	--	ND	--	--	ND	--	--

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.
 d = Analyte reported from secondary dilution.

Reviewed/Approved By: Mark Johnson
 Operations Manager

Date 6/17/16

The cover letter is an integral part of this analytical report



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 06/08/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK														
Client Sample I.D.:	-														
Date/Time Sampled:	-														
Date/Time Analyzed:	6/16/16 22:14														
QC Batch No.:	160616MS2A1														
Analyst Initials:	DT														
Dilution Factor:	0.20														
ANALYTE	Result ppmv	RL ppmv	MDL ppmv												
Dichlorodifluoromethane (12)	ND	0.00020	0.000031												
Chloromethane	ND	0.00040	0.000044												
1,2-CI-1,1,2,2-F ethane (114)	ND	0.00020	0.000040												
Vinyl Chloride	ND	0.00020	0.000032												
Bromomethane	0.00015 J	0.00050	0.000059												
Chloroethane	ND	0.00020	0.00017												
Trichlorofluoromethane (11)	ND	0.00020	0.000043												
1,1-Dichloroethene	ND	0.00020	0.000045												
Carbon Disulfide	ND	0.0010	0.000048												
1,1,2-CI 1,2,2-F ethane (113)	ND	0.00020	0.000054												
Acetone	0.00015 J	0.0010	0.000058												
Methylene Chloride	ND	0.00020	0.000057												
t-1,2-Dichloroethene	ND	0.00020	0.000060												
1,1-Dichloroethane	ND	0.00020	0.000027												
c-1,2-Dichloroethene	ND	0.00020	0.000039												
2-Butanone	ND	0.00020	0.00012												
t-Butyl Methyl Ether (MTBE)	ND	0.00020	0.000045												
Chloroform	ND	0.00020	0.000028												
1,1,1-Trichloroethane	ND	0.00020	0.000020												
Carbon Tetrachloride	ND	0.00020	0.000035												
Benzene	0.000025 J	0.00020	0.000019												
1,2-Dichloroethane	ND	0.00020	0.000015												
Trichloroethene	ND	0.00020	0.000028												
1,2-Dichloropropane	ND	0.00020	0.000036												
Bromodichloromethane	ND	0.00020	0.000012												
c-1,3-Dichloropropene	ND	0.00020	0.000024												
4-Methyl-2-Pentanone	ND	0.00020	0.000013												
Toluene	ND	0.00020	0.000016												
t-1,3-Dichloropropene	ND	0.00020	0.000021												
1,1,2-Trichloroethane	ND	0.00020	0.000032												
1,3-Dichloropropane	ND	0.00020	0.0000099												
Tetrachloroethene	ND	0.00020	0.000024												
2-Hexanone	ND	0.00020	0.000041												
Dibromochloromethane	ND	0.00020	0.000036												
1,2-Dibromoethane	ND	0.00020	0.000018												
Chlorobenzene	ND	0.00020	0.000016												
Ethylbenzene	ND	0.00020	0.000011												
p,&m-Xylene	ND	0.00020	0.000023												
o-Xylene	0.000058 J	0.00020	0.000024												



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 06/08/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK																	
Client Sample I.D.:	-																	
Date/Time Sampled:	-																	
Date/Time Analyzed:	6/16/16 22:14																	
QC Batch No.:	160616MS2A1																	
Analyst Initials:	DT																	
Dilution Factor:	0.20																	
ANALYTE	Result ppmv	RL ppmv	MDL ppmv															
Styrene	ND	0.00020	0.000026															
Bromoform	ND	0.00020	0.000011															
Isopropyl benzene	ND	0.00020	0.000021															
1,1,2,2-Tetrachloroethane	ND	0.00040	0.000012															
Benzyl Chloride	ND	0.00020	0.000037															
1,2,3-Trichloropropane	ND	0.00020	0.000054															
n-Propyl Benzene	ND	0.00020	0.000012															
4-Ethyl Toluene	ND	0.00020	0.000013															
1,3,5-Trimethylbenzene	ND	0.00040	0.000035															
4-Chlorotoluene	ND	0.00020	0.000024															
tert-Butylbenzene	ND	0.00020	0.000018															
1,2,4-Trimethylbenzene	ND	0.00040	0.000023															
sec-Butylbenzene	ND	0.00020	0.000019															
p-Isopropyltoluene	0.000070 J	0.00020	0.000026															
1,3-Dichlorobenzene	ND	0.00020	0.000024															
1,4-Dichlorobenzene	ND	0.00020	0.000029															
n-Butylbenzene	ND	0.00020	0.000015															
1,2-Dichlorobenzene	ND	0.00020	0.000025															
1,2,4-Trichlorobenzene	ND	0.00040	0.000033															
Hexachlorobutadiene	ND	0.00020	0.000012															
t-Butanol	ND	0.0010	0.000038															
n-Hexane	ND	0.0010	0.000027															
Isopropyl ether	ND	0.0010	0.000022															
t-Butyl ethyl ether	ND	0.0010	0.000040															
2,2-Dichloropropane	ND	0.0010	0.000019															
t-Amyl methyl ether	ND	0.0010	0.000014															
1,4-Dioxane	ND	0.0010	0.000035															
Naphthalene	ND	0.0010	0.000077															
1,2,3-Trichlorobenzene (TIC)	ND	--	--															

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date 6/17/16

The cover letter is an integral part of this analytical report



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 06/08/16
 Matrix: Air
 Reporting Units: ppmv

EPA METHOD TO3

Lab No.:	H060805-01	H060805-02	H060805-03	H060805-04								
Client Sample I.D.:	VEFF-06-07	VEFF-06-07-D	VPOST-06-07	VINF-06-07								
Date/Time Sampled:	6/7/16 11:17	6/7/16 11:17	6/7/16 11:18	6/7/16 11:20								
Date/Time Analyzed:	6/10/16 10:09	6/10/16 11:20	6/10/16 13:48	6/10/16 15:19								
QC Batch No.:	160610GC11A1	160610GC11A1	160610GC11A1	160610GC11A1								
Analyst Initials:	AS	AS	AS	AS								
Dilution Factor:	2.5	2.5	20	2.2								
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
TVOC as Hexane	0.51	J 2.5	0.44	ND	2.5	0.44	480	20	3.5	150	2.2	0.38

MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date: 6/17/16

The cover letter is an integral part of this analytical report



QC Batch No: 160610GC11A1

Matrix: Air

Reporting Units: ppmv

EPA METHOD TO3
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK	LCS	LCSD								
Date Analyzed:	6/10/16 9:41	6/10/16 8:56	6/10/16 9:19								
Analyst Initials:	AS	AS	AS								
Dilution Factor:	1.0	1.0	1.0								
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	% Rec.	Result ppmv	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
TVOC as Hexane	ND	1.0	0.18	4.00	80	4.00	80	0.0	70	130	25

MDL = Method Detection Limit

ND= Not Detected (below MDL)

RL = Reporting Limit

J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: Mark Johnson
Operations Manager

Date 6/17/16

The cover letter is an integral part of this analytical report



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP- Norwalk Site
 Project No.: NA
 Date Received: 06/08/16
 Matrix: Air
 Reporting Units: % v/v

ASTM D1946

Lab No.:	H060805-04								
Client Sample I.D.:	VINF-06-07								
Date/Time Sampled:	6/7/16 11:20								
Date/Time Analyzed:	6/9/16 11:41								
QC Batch No.:	160609GC8A1								
Analyst Initials:	AS								
Dilution Factor:	2.2								
ANALYTE	Result % v/v	RL % v/v	MDL % v/v						
Carbon Dioxide	0.32	0.022	0.00091						
Oxygen/Argon	21	1.1	0.079						
Nitrogen	78	2.2	0.31						
Methane	0.0065	0.0022	0.000098						

Results normalized including non-methane hydrocarbons
 MDL = Method Detection Limit
 ND= Not Detected (below MDL)
 RL = Reporting Limit
 J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date 6/17/16

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QC Batch No.: 160609GC8A1

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank				LCS		LCSD			
Date/Time Analyzed:	6/9/16 9:29				6/9/16 8:45		6/9/16 9:00			
Analyst Initials:	AS				AS		AS			
Datafile:	09jun004				09jun001		09jun002			
Dilution Factor:	1.0				1.0		1.0			
ANALYTE	Results		RL	MDL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Carbon Dioxide	ND		0.010	0.00042	102	70-130%	101	70-130%	1.2	<30
Oxygen/Argon	0.19	J	0.50	0.03677	102	70-130%	100	70-130%	1.1	<30
Nitrogen	0.63	J	1.0	0.14494	103	70-130%	102	70-130%	1.0	<30
Methane	ND		0.0010	0.00005	105	70-130%	104	70-130%	0.8	<30


PQL = Practical Quantitation Limit

ND = Not Detected (Below MDL)

RL = PQL X Dilution Factor

J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____


 Mark J. Johnson
 Operations Manager

Date: _____

6/17/16

The cover letter is an integral part of this analytical report.



April 15, 2016

Dan Jablonski
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

TEL:

FAX:

Workorder No.: N019328

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on April 06, 2016 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Glen Gesmundo
QA Manager

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ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CALIFORNIA
11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436

NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Project: SFPP - Norwalk Site
Lab Order: N019328
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N019328-001A	INF-04-05	Wastewater	4/5/2016 11:15:00 AM	4/6/2016	4/15/2016
N019328-001B	INF-04-05	Wastewater	4/5/2016 11:15:00 AM	4/6/2016	4/15/2016



CLIENT: CH2Mhill
Project: SFPP - Norwalk Site
Lab Order: N019328

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Analytical Comments for EPA 8015B DRO/ORO:

Method Blank has hit above the reporting limit but less than 1/10 of the amount measured in sample.



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 15-Apr-16

CLIENT: CH2MHill
Lab Order: N019328
Project: SFPP - Norwalk Site
Lab ID: N019328-001

Client Sample ID: INF-04-05
Collection Date: 4/5/2016 11:15:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_160406A	QC Batch: P16VW071	PrepDate:	Analyst: QBM			
1,1,1,2-Tetrachloroethane	ND	0.66	10	ug/L	10	4/6/2016 01:44 PM
1,1,1-Trichloroethane	ND	0.68	10	ug/L	10	4/6/2016 01:44 PM
1,1,2,2-Tetrachloroethane	ND	0.31	10	ug/L	10	4/6/2016 01:44 PM
1,1,2-Trichloroethane	ND	0.62	10	ug/L	10	4/6/2016 01:44 PM
1,1-Dichloroethane	ND	0.22	5.0	ug/L	10	4/6/2016 01:44 PM
1,1-Dichloroethene	ND	0.87	10	ug/L	10	4/6/2016 01:44 PM
1,1-Dichloropropene	ND	0.44	10	ug/L	10	4/6/2016 01:44 PM
1,2,3-Trichlorobenzene	ND	0.56	10	ug/L	10	4/6/2016 01:44 PM
1,2,3-Trichloropropane	ND	0.59	10	ug/L	10	4/6/2016 01:44 PM
1,2,4-Trichlorobenzene	ND	0.60	10	ug/L	10	4/6/2016 01:44 PM
1,2,4-Trimethylbenzene	3000	4.2	100	ug/L	100	4/6/2016 01:19 PM
1,2-Dibromo-3-chloropropane	ND	0.47	20	ug/L	10	4/6/2016 01:44 PM
1,2-Dibromoethane	ND	0.57	10	ug/L	10	4/6/2016 01:44 PM
1,2-Dichlorobenzene	ND	0.40	10	ug/L	10	4/6/2016 01:44 PM
1,2-Dichloroethane	ND	0.64	5.0	ug/L	10	4/6/2016 01:44 PM
1,2-Dichloropropane	ND	0.62	10	ug/L	10	4/6/2016 01:44 PM
1,3,5-Trimethylbenzene	850	0.15	10	ug/L	10	4/6/2016 01:44 PM
1,3-Dichlorobenzene	ND	0.57	10	ug/L	10	4/6/2016 01:44 PM
1,3-Dichloropropane	ND	0.40	10	ug/L	10	4/6/2016 01:44 PM
1,4-Dichlorobenzene	ND	0.30	10	ug/L	10	4/6/2016 01:44 PM
2,2-Dichloropropane	ND	0.26	10	ug/L	10	4/6/2016 01:44 PM
2-Butanone	ND	4.8	100	ug/L	10	4/6/2016 01:44 PM
2-Chlorotoluene	ND	0.40	10	ug/L	10	4/6/2016 01:44 PM
4-Chlorotoluene	ND	0.36	10	ug/L	10	4/6/2016 01:44 PM
4-Isopropyltoluene	16	0.22	10	ug/L	10	4/6/2016 01:44 PM
4-Methyl-2-pentanone	ND	1.7	100	ug/L	10	4/6/2016 01:44 PM
Acetone	ND	11	100	ug/L	10	4/6/2016 01:44 PM
Benzene	1500	3.6	100	ug/L	100	4/6/2016 01:19 PM
Bromobenzene	ND	0.43	10	ug/L	10	4/6/2016 01:44 PM
Bromochloromethane	ND	2.2	10	ug/L	10	4/6/2016 01:44 PM
Bromodichloromethane	ND	0.31	10	ug/L	10	4/6/2016 01:44 PM
Bromoform	ND	3.2	10	ug/L	10	4/6/2016 01:44 PM
Bromomethane	ND	3.2	10	ug/L	10	4/6/2016 01:44 PM
Carbon disulfide	ND	0.25	10	ug/L	10	4/6/2016 01:44 PM
Carbon tetrachloride	ND	0.57	5.0	ug/L	10	4/6/2016 01:44 PM
Chlorobenzene	ND	0.36	10	ug/L	10	4/6/2016 01:44 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 15-Apr-16

CLIENT: CH2MHill
Lab Order: N019328
Project: SFPP - Norwalk Site
Lab ID: N019328-001

Client Sample ID: INF-04-05
Collection Date: 4/5/2016 11:15:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_160406A	QC Batch: P16VW071	PrepDate:	Analyst: QBM			
Chloroethane	ND	0.99	10	ug/L	10	4/6/2016 01:44 PM
Chloroform	ND	0.36	10	ug/L	10	4/6/2016 01:44 PM
Chloromethane	ND	1.2	10	ug/L	10	4/6/2016 01:44 PM
cis-1,2-Dichloroethene	ND	0.51	10	ug/L	10	4/6/2016 01:44 PM
cis-1,3-Dichloropropene	ND	0.44	10	ug/L	10	4/6/2016 01:44 PM
Di-isopropyl ether	ND	0.17	10	ug/L	10	4/6/2016 01:44 PM
Dibromochloromethane	ND	0.72	10	ug/L	10	4/6/2016 01:44 PM
Dibromomethane	ND	1.7	10	ug/L	10	4/6/2016 01:44 PM
Dichlorodifluoromethane	ND	0.70	10	ug/L	10	4/6/2016 01:44 PM
Ethyl tert-butyl ether	ND	0.39	10	ug/L	10	4/6/2016 01:44 PM
Ethylbenzene	450	0.36	10	ug/L	10	4/6/2016 01:44 PM
Freon-113	ND	0.74	10	ug/L	10	4/6/2016 01:44 PM
Hexachlorobutadiene	ND	1.1	10	ug/L	10	4/6/2016 01:44 PM
Isopropylbenzene	50	0.34	10	ug/L	10	4/6/2016 01:44 PM
m,p-Xylene	8300	2.4	100	ug/L	100	4/6/2016 01:19 PM
Methylene chloride	ND	2.8	20	ug/L	10	4/6/2016 01:44 PM
MTBE	390	0.62	10	ug/L	10	4/6/2016 01:44 PM
n-Butylbenzene	42	0.31	10	ug/L	10	4/6/2016 01:44 PM
n-Propylbenzene	150	0.18	10	ug/L	10	4/6/2016 01:44 PM
Naphthalene	690	0.48	10	ug/L	10	4/6/2016 01:44 PM
o-Xylene	3800	4.2	100	ug/L	100	4/6/2016 01:19 PM
sec-Butylbenzene	22	0.25	10	ug/L	10	4/6/2016 01:44 PM
Styrene	ND	0.35	10	ug/L	10	4/6/2016 01:44 PM
Tert-amyl methyl ether	ND	0.39	10	ug/L	10	4/6/2016 01:44 PM
Tert-Butanol	ND	3.0	50	ug/L	10	4/6/2016 01:44 PM
tert-Butylbenzene	ND	0.30	10	ug/L	10	4/6/2016 01:44 PM
Tetrachloroethene	ND	1.6	10	ug/L	10	4/6/2016 01:44 PM
Toluene	2200	4.2	200	ug/L	100	4/6/2016 01:19 PM
trans-1,2-Dichloroethene	ND	0.70	10	ug/L	10	4/6/2016 01:44 PM
trans-1,3-Dichloropropene	ND	0.39	10	ug/L	10	4/6/2016 01:44 PM
Trichloroethene	ND	1.2	10	ug/L	10	4/6/2016 01:44 PM
Trichlorofluoromethane	ND	0.31	10	ug/L	10	4/6/2016 01:44 PM
Vinyl chloride	ND	0.95	5.0	ug/L	10	4/6/2016 01:44 PM
Xylenes, Total	12000	150	200	ug/L	100	4/6/2016 01:19 PM
Surr: 1,2-Dichloroethane-d4	99.2	0	72-119	%REC	100	4/6/2016 01:19 PM
Surr: 1,2-Dichloroethane-d4	104	0	72-119	%REC	10	4/6/2016 01:44 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



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CALIFORNIA
11060 Artesia Blvd., Ste C, Cerritos, CA 90703
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P: 702.307.2659 F: 702.307.2691

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ANALYTICAL RESULTS

Print Date: 15-Apr-16

CLIENT: CH2MHill
Lab Order: N019328
Project: SFPP - Norwalk Site
Lab ID: N019328-001

Client Sample ID: INF-04-05
Collection Date: 4/5/2016 11:15:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS5_160406A	QC Batch:	P16VW071	PrepDate:	Analyst:	QBM	
Surr:	4-Bromofluorobenzene	105	0	76-119	%REC	10	4/6/2016 01:44 PM
Surr:	4-Bromofluorobenzene	101	0	76-119	%REC	100	4/6/2016 01:19 PM
Surr:	Dibromofluoromethane	102	0	85-115	%REC	100	4/6/2016 01:19 PM
Surr:	Dibromofluoromethane	103	0	85-115	%REC	10	4/6/2016 01:44 PM
Surr:	Toluene-d8	102	0	81-120	%REC	10	4/6/2016 01:44 PM
Surr:	Toluene-d8	99.6	0	81-120	%REC	100	4/6/2016 01:19 PM

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

RunID:	GC1_160409A	QC Batch:	56917	PrepDate:	4/7/2016	Analyst:	MDM
TPH-Diesel (C13-C22)	31000	780	1300	ug/L	50	4/10/2016 01:36 PM	
TPH-Oil (C23-C36)	1100	14	26	ug/L	1	4/9/2016 12:18 PM	
Surr: Octacosane	70.4	0	26-152	%REC	1	4/9/2016 12:18 PM	
Surr: p-Terphenyl	67.6	0	57-132	%REC	50	4/10/2016 01:36 PM	

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

RunID:	GC4_160413A	QC Batch:	E16VW024	PrepDate:	Analyst:	QBM
TPH-Gasoline (C4-C12)	32000	160	500	ug/L	10	4/13/2016 02:18 PM
Surr: Chlorobenzene - d5	92.6	0	74-138	%REC	10	4/13/2016 02:18 PM

TOTAL TPH

EPA 8015B

RunID:	GC1_160409A	QC Batch:	R106837	PrepDate:	Analyst:	MDM
Total TPH	64100	16	50	ug/L	1	4/9/2016

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified

E Value above quantitation range
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out



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 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site
TestCode: 8015_W_FP_SFPP

ANALYTICAL QC SUMMARY REPORT

Sample ID: MB-56917	SampType: MBLK	TestCode: 8015_W_FP_	Units: ug/L	Prep Date: 4/7/2016	RunNo: 106837						
Client ID: PBW	Batch ID: 56917	TestNo: EPA 8015B	EPA 3510C	Analysis Date: 4/9/2016	SeqNo: 2290174						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Diesel (C13-C22)	ND	25									
TPH-Oil (C23-C36)	ND	25									
Surr: Octacosane	106.957		80.00		134	26	152				
Surr: p-Terphenyl	96.073		80.00		120	57	132				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

TestCode: 8015_W_SFPPTOT

Sample ID: MB-R106837	Samp Type: MBLK	TestCode: 8015_W_SFP	Units: ug/L
Client ID: PBW	Batch ID: R106837	TestNo: EPA 8015B	Prep Date:
Analyte	Result	PQL	SPK value
		%REC	LowLimit
		RPD Ref Val	HighLimit
			RPD Ref Val
			%RPD
			RPDLimit
			Qual

Total TPH

ND 50

RunNo: 106837

SeqNo: 2290178

Analysis Date: 4/9/2016

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

TestCode: 8015GAS_WSFPP

Sample ID: E160413LCS		SampType: LCS		TestCode: 8015GAS_WS		Units: ug/L		Prep Date:		RunNo: 106934	
Client ID: LCSW		Batch ID: E16VW024		TestNo: EPA 8015B				Analysis Date: 4/13/2016		SeqNo: 2296042	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	902.000	50	1000	0	90.2	67	136				B
Surr: Chlorobenzene - d5	46975.000		50000		94.0	74	138				

Sample ID: E160413MB1		SampType: MBLK		TestCode: 8015GAS_WS		Units: ug/L		Prep Date:		RunNo: 106934	
Client ID: PBW		Batch ID: E16VW024		TestNo: EPA 8015B				Analysis Date: 4/13/2016		SeqNo: 2296043	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	68.000	50			101	74	138				
Surr: Chlorobenzene - d5	50266.000		50000								

Sample ID: N019329-001JMS		SampType: MS		TestCode: 8015GAS_WS		Units: ug/L		Prep Date:		RunNo: 106934	
Client ID: ZZZZZ		Batch ID: E16VW024		TestNo: EPA 8015B				Analysis Date: 4/13/2016		SeqNo: 2296050	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	876.000	50	1000	39.00	83.7	67	136				B
Surr: Chlorobenzene - d5	51191.000		50000		102	74	138				

Sample ID: N019329-001JMSD		SampType: MSD		TestCode: 8015GAS_WS		Units: ug/L		Prep Date:		RunNo: 106934	
Client ID: ZZZZZ		Batch ID: E16VW024		TestNo: EPA 8015B				Analysis Date: 4/13/2016		SeqNo: 2296051	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	797.000	50	1000	39.00	75.8	67	136	876.0	9.44	30	B
Surr: Chlorobenzene - d5	46789.000		50000		93.6	74	138		0	0	

Qualifiers:

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- ND Not Detected at the Reporting Limit
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 CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436
 NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160406LCS	Samp Type: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 106809						
Client ID: LCSW	Batch ID: P16VW071	TestNo: EPA 8260B		Analysis Date: 4/6/2016	SeqNo: 2287773						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.650	1.0	20.00	0	103	81	129				
1,1,1-Trichloroethane	20.030	1.0	20.00	0	100	67	132				
1,1,2,2-Tetrachloroethane	20.470	1.0	20.00	0	102	63	128				
1,1,2-Trichloroethane	20.100	1.0	20.00	0	101	75	125				
1,1-Dichloroethane	19.360	0.50	20.00	0	96.8	69	133				
1,1-Dichloroethene	20.530	1.0	20.00	0	103	68	130				
1,1-Dichloropropene	19.920	1.0	20.00	0	99.6	73	132				
1,2,3-Trichlorobenzene	21.830	1.0	20.00	0	109	67	137				
1,2,3-Trichloropropane	20.290	1.0	20.00	0	101	73	124				
1,2,4-Trichlorobenzene	19.930	1.0	20.00	0	99.7	66	134				
1,2,4-Trimethylbenzene	20.870	1.0	20.00	0	104	74	132				
1,2-Dibromo-3-chloropropane	20.780	2.0	20.00	0	104	50	132				
1,2-Dibromoethane	21.010	1.0	20.00	0	105	80	121				
1,2-Dichlorobenzene	21.070	1.0	20.00	0	105	71	122				
1,2-Dichloroethane	20.220	0.50	20.00	0	101	69	132				
1,2-Dichloropropane	20.720	1.0	20.00	0	104	75	125				
1,3,5-Trimethylbenzene	21.300	1.0	20.00	0	106	74	131				
1,3-Dichlorobenzene	21.030	1.0	20.00	0	105	75	124				
1,3-Dichloropropane	20.230	1.0	20.00	0	101	73	126				
1,4-Dichlorobenzene	20.300	1.0	20.00	0	102	74	123				
2,2-Dichloropropane	20.290	1.0	20.00	0	101	69	137				
2-Butanone	213.330	10	200.0	0	107	49	136				
2-Chlorotoluene	20.800	1.0	20.00	0	104	73	126				
4-Chlorotoluene	21.040	1.0	20.00	0	105	74	128				
4-Isopropyltoluene	21.100	1.0	20.00	0	106	73	130				
4-Methyl-2-pentanone	216.920	10	200.0	0	108	58	134				
Acetone	213.540	10	200.0	0	107	40	135				
Benzene	20.760	1.0	20.00	0	104	81	122				
Bromobenzene	20.810	1.0	20.00	0	104	76	124				
Bromochloromethane	20.660	1.0	20.00	0	103	65	129				

Qualifiers:

- B Analyte detected in the associated Method Blank
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - R RPD outside accepted recovery limits
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
- Calculations are based on raw values



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ANALYTICAL SERVICES FOR ENVIRONMENTAL TECHNOLOGISTS
 CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436
 NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	Prep Date: 10/6/2016	
												RunNo: 106809	SeqNo: 2287773
Bromodichloromethane	20.710	1.0	20.00	0	104	76	121						
Bromoform	20.530	1.0	20.00	0	103	69	128						
Bromomethane	18.990	1.0	20.00	0	95.0	53	141						
Carbon disulfide	18.340	1.0	20.00	0	91.7	75	125						
Carbon tetrachloride	20.940	0.50	20.00	0	105	66	138						
Chlorobenzene	20.330	1.0	20.00	0	102	81	122						
Chloroethane	20.430	1.0	20.00	0	102	58	133						
Chloroform	19.530	1.0	20.00	0	97.6	69	128						
Chloromethane	18.250	1.0	20.00	0	91.2	56	131						
cis-1,2-Dichloroethene	19.280	1.0	20.00	0	96.4	72	126						
cis-1,3-Dichloropropene	20.590	1.0	20.00	0	103	69	131						
Di-isopropyl ether	20.170	1.0	20.00	0	101	70	130						
Dibromochloromethane	21.030	1.0	20.00	0	105	66	133						
Dibromomethane	21.060	1.0	20.00	0	105	76	125						
Dichlorodifluoromethane	18.940	1.0	20.00	0	94.7	53	153						
Ethyl tert-butyl ether	19.770	1.0	20.00	0	98.8	70	130						
Ethylbenzene	20.330	1.0	20.00	0	102	73	127						
Freon-113	20.350	1.0	20.00	0	102	75	125						
Hexachlorobutadiene	19.890	1.0	20.00	0	99.4	67	131						
Isopropylbenzene	20.960	1.0	20.00	0	105	75	127						
m,p-Xylene	41.350	1.0	40.00	0	103	76	128						
Methylene chloride	20.000	2.0	20.00	0	100	63	137						
MTBE	20.390	1.0	20.00	0	102	65	123						
n-Butylbenzene	20.380	1.0	20.00	0	102	69	137						
n-Propylbenzene	21.070	1.0	20.00	0	105	72	129						
Naphthalene	20.090	1.0	20.00	0	100	54	138						
o-Xylene	20.890	1.0	20.00	0	104	80	121						
sec-Butylbenzene	20.980	1.0	20.00	0	105	72	127						
Styrene	21.190	1.0	20.00	0	106	65	134						
Tert-amyl methyl ether	21.670	1.0	20.00	0	108	70	130						

Qualifiers:

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 CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436
 NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160406LCS	SampType: LCS	TestCode: 8260_WP_SF Units: ug/L
Client ID: LCSW	Batch ID: P16VW071	TestNo: EPA 8260B
RunNo: 106809		
SeqNo: 2287773		
Prep Date: 4/6/2016		
Analysis Date: 4/6/2016		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tert-Butanol	111.360	5.0	100.0	0	111	70	130				
tert-Butylbenzene	20.630	1.0	20.00	0	103	70	129				
Tetrachloroethene	20.830	1.0	20.00	0	104	66	128				
Toluene	20.470	2.0	20.00	0	102	77	122				
trans-1,2-Dichloroethene	19.740	1.0	20.00	0	98.7	63	137				
trans-1,3-Dichloropropene	21.190	1.0	20.00	0	106	59	135				
Trichloroethene	21.690	1.0	20.00	0	108	70	127				
Trichlorofluoromethane	20.040	1.0	20.00	0	100	57	129				
Vinyl chloride	20.140	0.50	20.00	0	101	50	134				
Xylenes, Total	62.240	2.0	60.00	0	104	75	125				
Surr: 1,2-Dichloroethane-d4	25.310		25.00		101	72	119				
Surr: 4-Bromofluorobenzene	25.670		25.00		103	76	119				
Surr: Dibromofluoromethane	25.330		25.00		101	85	115				
Surr: Toluene-d8	25.740		25.00		103	81	120				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.810	1.0	20.00	0	104	81	129	20.65	0.772	20	
1,1,1-Trichloroethane	19.920	1.0	20.00	0	99.6	67	132	20.03	0.551	20	
1,1,2,2-Tetrachloroethane	20.020	1.0	20.00	0	100	63	128	20.47	2.22	20	
1,1,2-Trichloroethane	19.810	1.0	20.00	0	99.0	75	125	20.10	1.45	20	
1,1-Dichloroethane	19.450	0.50	20.00	0	97.3	69	133	19.36	0.464	20	
1,1-Dichloroethene	19.810	1.0	20.00	0	99.0	68	130	20.53	3.57	20	
1,1-Dichloropropene	19.720	1.0	20.00	0	98.6	73	132	19.92	1.01	20	
1,2,3-Trichlorobenzene	21.730	1.0	20.00	0	109	67	137	21.83	0.459	20	
1,2,3-Trichloropropane	19.660	1.0	20.00	0	98.3	73	124	20.29	3.15	20	
1,2,4-Trichlorobenzene	19.720	1.0	20.00	0	98.6	66	134	19.93	1.06	20	
1,2,4-Trimethylbenzene	20.340	1.0	20.00	0	102	74	132	20.87	2.57	20	

Qualifiers:

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ASSET LABORATORIES
ANALYTICAL SERVICES ENVIRONMENTAL TECHNOLOGICAL
 CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436
 NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P160406LCSD	SampType: LCSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 106809						
Client ID: LCSS02	Batch ID: P16VW071	TestNo: EPA 8260B		Analysis Date: 4/6/2016	SeqNo: 2287774						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	20.690	2.0	20.00	0	103	50	132	20.78	0.434	20	
1,2-Dibromoethane	20.300	1.0	20.00	0	102	80	121	21.01	3.44	20	
1,2-Dichlorobenzene	20.770	1.0	20.00	0	104	71	122	21.07	1.43	20	
1,2-Dichloroethane	20.270	0.50	20.00	0	101	69	132	20.22	0.247	20	
1,2-Dichloropropane	20.300	1.0	20.00	0	102	75	125	20.72	2.05	20	
1,3,5-Trimethylbenzene	20.790	1.0	20.00	0	104	74	131	21.30	2.42	20	
1,3-Dichlorobenzene	20.160	1.0	20.00	0	101	75	124	21.03	4.22	20	
1,3-Dichloropropane	20.440	1.0	20.00	0	102	73	126	20.23	1.03	20	
1,4-Dichlorobenzene	19.890	1.0	20.00	0	99.4	74	123	20.30	2.04	20	
2,2-Dichloropropane	20.090	1.0	20.00	0	100	69	137	20.29	0.991	20	
2-Butanone	204.470	10	200.0	0	102	49	136	213.3	4.24	20	
2-Chlorotoluene	20.160	1.0	20.00	0	101	73	126	20.80	3.13	20	
4-Chlorotoluene	20.270	1.0	20.00	0	101	74	128	21.04	3.73	20	
4-Isopropyltoluene	20.510	1.0	20.00	0	103	73	130	21.10	2.84	20	
4-Methyl-2-pentanone	214.110	10	200.0	0	107	58	134	216.9	1.30	20	
Acetone	191.210	10	200.0	0	95.6	40	135	213.5	11.0	20	
Benzene	20.190	1.0	20.00	0	101	81	122	20.76	2.78	20	
Bromobenzene	19.980	1.0	20.00	0	99.9	76	124	20.81	4.07	20	
Bromochloromethane	20.530	1.0	20.00	0	103	65	129	20.66	0.631	20	
Bromodichloromethane	20.510	1.0	20.00	0	103	76	121	20.71	0.970	20	
Bromoform	20.430	1.0	20.00	0	102	69	128	20.53	0.488	20	
Bromomethane	19.760	1.0	20.00	0	98.8	53	141	18.99	3.97	20	
Carbon disulfide	18.210	1.0	20.00	0	91.1	75	125	18.34	0.711	20	
Carbon tetrachloride	20.620	0.50	20.00	0	103	66	138	20.94	1.54	20	
Chlorobenzene	20.070	1.0	20.00	0	100	81	122	20.33	1.29	20	
Chloroethane	20.230	1.0	20.00	0	101	58	133	20.43	0.984	20	
Chloroform	19.360	1.0	20.00	0	96.8	69	128	19.53	0.874	20	
Chloromethane	18.340	1.0	20.00	0	91.7	56	131	18.25	0.492	20	
cis-1,2-Dichloroethene	19.110	1.0	20.00	0	95.6	72	126	19.28	0.886	20	
cis-1,3-Dichloropropene	19.870	1.0	20.00	0	99.4	69	131	20.59	3.56	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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NEVADA
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 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160406LCSD	SampType: LCSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 106809						
Client ID: LCSS02	Batch ID: P16VW071	TestNo: EPA 8260B		Analysis Date: 4/6/2016	SeqNo: 2287774						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diisopropyl ether	20.140	1.0	20.00	0	101	70	130	20.17	0.149	20	
Dibromochloromethane	20.870	1.0	20.00	0	104	66	133	21.03	0.764	20	
Dibromomethane	20.610	1.0	20.00	0	103	76	125	21.06	2.16	20	
Dichlorodifluoromethane	18.500	1.0	20.00	0	92.5	53	153	18.94	2.35	20	
Ethyl tert-butyl ether	20.060	1.0	20.00	0	100	70	130	19.77	1.46	20	
Ethylbenzene	19.820	1.0	20.00	0	99.1	73	127	20.33	2.54	20	
Freon-113	19.610	1.0	20.00	0	98.0	75	125	20.35	3.70	20	
Hexachlorobutadiene	19.970	1.0	20.00	0	99.8	67	131	19.89	0.401	20	
Isopropylbenzene	20.290	1.0	20.00	0	101	75	127	20.96	3.25	20	
m,p-Xylene	41.020	1.0	40.00	0	103	76	128	41.35	0.801	20	
Methylene chloride	19.510	2.0	20.00	0	97.6	63	137	20.00	2.48	20	
MTBE	20.450	1.0	20.00	0	102	65	123	20.39	0.294	20	
n-Butylbenzene	20.040	1.0	20.00	0	100	69	137	20.38	1.68	20	
n-Propylbenzene	20.400	1.0	20.00	0	102	72	129	21.07	3.23	20	
Naphthalene	20.030	1.0	20.00	0	100	54	138	20.09	0.299	20	
o-Xylene	20.620	1.0	20.00	0	103	80	121	20.89	1.30	20	
sec-Butylbenzene	20.280	1.0	20.00	0	101	72	127	20.98	3.39	20	
Styrene	20.850	1.0	20.00	0	104	65	134	21.19	1.62	20	
Tert-amyl methyl ether	21.120	1.0	20.00	0	106	70	130	21.67	2.57	20	
Tert-Butanol	108.710	5.0	100.0	0	109	70	130	111.4	2.41	20	
tert-Butylbenzene	20.040	1.0	20.00	0	100	70	129	20.63	2.90	20	
Tetrachloroethene	20.090	1.0	20.00	0	100	66	128	20.83	3.62	20	
Toluene	20.140	2.0	20.00	0	101	77	122	20.47	1.63	20	
trans-1,2-Dichloroethene	19.870	1.0	20.00	0	99.4	63	137	19.74	0.656	20	
trans-1,3-Dichloropropene	20.440	1.0	20.00	0	102	59	135	21.19	3.60	20	
Trichloroethene	21.010	1.0	20.00	0	105	70	127	21.69	3.19	20	
Trichlorofluoromethane	19.990	1.0	20.00	0	100	57	129	20.04	0.250	20	
Vinyl chloride	19.960	0.50	20.00	0	99.8	50	134	20.14	0.898	20	
Xylenes, Total	61.640	2.0	60.00	0	103	75	125	62.24	0.969	20	
Surr: 1,2-Dichloroethane-d4	25.060		25.00		100	72	119		0		

Qualifiers:

- B Analyte detected in the associated Method Blank
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - R RPD outside accepted recovery limits
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
- Calculations are based on raw values



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 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160406LCSD	SampType: LCSD	TestCode: 8260_WP_SF	Units: ug/L								
Client ID: LCSS02	Batch ID: P16VW071	TestNo: EPA 8260B									
Prep Date: 4/6/2016 RunNo: 106809											
Analysis Date: 4/6/2016 SeqNo: 2287774											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	25.140		25.00		101	76	119		0		
Surr: Dibromofluoromethane	25.220		25.00		101	85	115		0		
Surr: Toluene-d8	24.920		25.00		99.7	81	120		0		

Sample ID: P160406MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L								
Client ID: PBW	Batch ID: P16VW071	TestNo: EPA 8260B									
Prep Date: 4/6/2016 RunNo: 106809											
Analysis Date: 4/6/2016 SeqNo: 2287777											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	1.0									
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	1.0									
1,1-Dichloropropene	ND	1.0									
1,2,3-Trichlorobenzene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2,4-Trichlorobenzene	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,2-Dibromo-3-chloropropane	ND	2.0									
1,2-Dibromoethane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2,2-Dichloropropane	ND	1.0									
2-Butanone	ND	10									

Qualifiers:

- B Analyte detected in the associated Method Blank
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - R RPD outside accepted recovery limits
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
- Calculations are based on raw values



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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160406MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 106809						
Client ID: PBW	Batch ID: P16VW071	TestNo: EPA 8260B		Analysis Date: 4/6/2016	SeqNo: 2287777						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	ND	1.0									
4-Chlorotoluene	ND	1.0									
4-Isopropyltoluene	ND	1.0									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	1.0									
Bromobenzene	ND	1.0									
Bromochloromethane	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Chloromethane	ND	1.0									
cis-1,2-Dichloroethene	ND	1.0									
cis-1,3-Dichloropropene	ND	1.0									
Di-isopropyl ether	ND	1.0									
Dibromochloromethane	ND	1.0									
Dibromomethane	ND	1.0									
Dichlorodifluoromethane	ND	1.0									
Ethyl tert-butyl ether	ND	1.0									
Ethylbenzene	ND	1.0									
Freon-113	ND	1.0									
Hexachlorobutadiene	ND	1.0									
Isopropylbenzene	ND	1.0									
m,p-Xylene	0.030	1.0									
Methylene chloride	0.450	2.0									

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019328
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160406MB3	Samp Type: MBLK	TestCode: 8260_WP_SF	Units: ug/L
Client ID: PBW	Batch ID: P16VW071	TestNo: EPA 8260B	
Analyte	Result	PQL	SPK value
			SPK Ref Val
		%REC	LowLimit
			HighLimit
			RPD Ref Val
			%RPD
			RPDLimit
			Qual
			RunNo: 106809
			SeqNo: 2287777
			Prep Date:
			Analysis Date: 4/6/2016

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	ND	1.0									
n-Butylbenzene	0.070	1.0									
n-Propylbenzene	0.030	1.0									
Naphthalene	ND	1.0									
o-Xylene	ND	1.0									
sec-Butylbenzene	ND	1.0									
Styrene	ND	1.0									
Tert-amyl methyl ether	ND	1.0									
Tert-Butanol	ND	5.0									
tert-Butylbenzene	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	2.0									
trans-1,2-Dichloroethene	ND	1.0									
trans-1,3-Dichloropropene	ND	1.0									
Trichloroethene	ND	1.0									
Trichlorofluoromethane	ND	1.0									
Vinyl chloride	ND	0.50									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-q4	24.900		25.00		99.6	72			119		
Surr: 4-Bromofluorobenzene	24.860		25.00		99.4	76			119		
Surr: Dibromofluoromethane	25.490		25.00		102	85			115		
Surr: Toluene-d8	25.440		25.00		102	81			120		

Qualifiers:

B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 E Value above quantitation range
 R RPD outside accepted recovery limits
 Calculations are based on raw values
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference



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May 11, 2016

Dan Jablonski
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

TEL:

FAX:

Workorder No.: N019609

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on May 04, 2016 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Glen Gesmundo
QA Manager

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CLIENT: CH2Mhill
Project: SFPP - Norwalk Site
Lab Order: N019609

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Sample was received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Sample was analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Analytical Comments for EPA 8260B:

Laboratory Control Sample (LCS) recovery biased high for Dichlorodifluoromethane. Sample result was non-detect (ND) for this analyte therefore reanalysis of the sample was not necessary.



CLIENT: CH2MHill
Project: SFPP - Norwalk Site
Lab Order: N019609
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N019609-001A	INF-05-03	Wastewater	5/3/2016 9:55:00 AM	5/4/2016	5/11/2016
N019609-001B	INF-05-03	Wastewater	5/3/2016 9:55:00 AM	5/4/2016	5/11/2016



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 11-May-16

CLIENT: CH2MHill
Lab Order: N019609
Project: SFPP - Norwalk Site
Lab ID: N019609-001

Client Sample ID: INF-05-03
Collection Date: 5/3/2016 9:55:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_160504A	QC Batch: P16VW087	PrepDate:	Analyst: RB			
1,1,1,2-Tetrachloroethane	ND	0.066	1.0	ug/L	1	5/4/2016 06:31 PM
1,1,1-Trichloroethane	ND	0.068	1.0	ug/L	1	5/4/2016 06:31 PM
1,1,2,2-Tetrachloroethane	ND	0.031	1.0	ug/L	1	5/4/2016 06:31 PM
1,1,2-Trichloroethane	ND	0.062	1.0	ug/L	1	5/4/2016 06:31 PM
1,1-Dichloroethane	ND	0.022	0.50	ug/L	1	5/4/2016 06:31 PM
1,1-Dichloroethene	ND	0.087	1.0	ug/L	1	5/4/2016 06:31 PM
1,1-Dichloropropene	ND	0.044	1.0	ug/L	1	5/4/2016 06:31 PM
1,2,3-Trichlorobenzene	ND	0.056	1.0	ug/L	1	5/4/2016 06:31 PM
1,2,3-Trichloropropane	ND	0.059	1.0	ug/L	1	5/4/2016 06:31 PM
1,2,4-Trichlorobenzene	ND	0.060	1.0	ug/L	1	5/4/2016 06:31 PM
1,2,4-Trimethylbenzene	82	0.042	1.0	ug/L	1	5/4/2016 06:31 PM
1,2-Dibromo-3-chloropropane	ND	0.047	2.0	ug/L	1	5/4/2016 06:31 PM
1,2-Dibromoethane	ND	0.057	1.0	ug/L	1	5/4/2016 06:31 PM
1,2-Dichlorobenzene	ND	0.040	1.0	ug/L	1	5/4/2016 06:31 PM
1,2-Dichloroethane	ND	0.064	0.50	ug/L	1	5/4/2016 06:31 PM
1,2-Dichloropropane	ND	0.062	1.0	ug/L	1	5/4/2016 06:31 PM
1,3,5-Trimethylbenzene	38	0.015	1.0	ug/L	1	5/4/2016 06:31 PM
1,3-Dichlorobenzene	ND	0.057	1.0	ug/L	1	5/4/2016 06:31 PM
1,3-Dichloropropane	ND	0.040	1.0	ug/L	1	5/4/2016 06:31 PM
1,4-Dichlorobenzene	ND	0.030	1.0	ug/L	1	5/4/2016 06:31 PM
2,2-Dichloropropane	ND	0.026	1.0	ug/L	1	5/4/2016 06:31 PM
2-Butanone	ND	0.48	10	ug/L	1	5/4/2016 06:31 PM
2-Chlorotoluene	ND	0.040	1.0	ug/L	1	5/4/2016 06:31 PM
4-Chlorotoluene	ND	0.036	1.0	ug/L	1	5/4/2016 06:31 PM
4-Isopropyltoluene	0.77	0.022	1.0	J ug/L	1	5/4/2016 06:31 PM
4-Methyl-2-pentanone	ND	0.17	10	ug/L	1	5/4/2016 06:31 PM
Acetone	ND	1.1	10	ug/L	1	5/4/2016 06:31 PM
Benzene	990	0.36	10	ug/L	10	5/4/2016 02:43 PM
Bromobenzene	ND	0.043	1.0	ug/L	1	5/4/2016 06:31 PM
Bromochloromethane	ND	0.22	1.0	ug/L	1	5/4/2016 06:31 PM
Bromodichloromethane	ND	0.031	1.0	ug/L	1	5/4/2016 06:31 PM
Bromoform	ND	0.32	1.0	ug/L	1	5/4/2016 06:31 PM
Bromomethane	ND	0.32	1.0	ug/L	1	5/4/2016 06:31 PM
Carbon disulfide	0.27	0.025	1.0	J ug/L	1	5/4/2016 06:31 PM
Carbon tetrachloride	ND	0.057	0.50	ug/L	1	5/4/2016 06:31 PM
Chlorobenzene	ND	0.036	1.0	ug/L	1	5/4/2016 06:31 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



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NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

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ANALYTICAL RESULTS

Print Date: 11-May-16

CLIENT: CH2MHill
Lab Order: N019609
Project: SFPP - Norwalk Site
Lab ID: N019609-001

Client Sample ID: INF-05-03
Collection Date: 5/3/2016 9:55:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_160504A	QC Batch: P16VW087	PrepDate:	Analyst: RB			
Chloroethane	ND	0.099	1.0	ug/L	1	5/4/2016 06:31 PM
Chloroform	ND	0.036	1.0	ug/L	1	5/4/2016 06:31 PM
Chloromethane	ND	0.12	1.0	ug/L	1	5/4/2016 06:31 PM
cis-1,2-Dichloroethene	ND	0.051	1.0	ug/L	1	5/4/2016 06:31 PM
cis-1,3-Dichloropropene	ND	0.044	1.0	ug/L	1	5/4/2016 06:31 PM
Di-isopropyl ether	7.1	0.017	1.0	ug/L	1	5/4/2016 06:31 PM
Dibromochloromethane	ND	0.072	1.0	ug/L	1	5/4/2016 06:31 PM
Dibromomethane	ND	0.17	1.0	ug/L	1	5/4/2016 06:31 PM
Dichlorodifluoromethane	ND	0.070	1.0	ug/L	1	5/4/2016 06:31 PM
Ethyl tert-butyl ether	ND	0.039	1.0	ug/L	1	5/4/2016 06:31 PM
Ethylbenzene	18	0.036	1.0	ug/L	1	5/4/2016 06:31 PM
Freon-113	ND	0.074	1.0	ug/L	1	5/4/2016 06:31 PM
Hexachlorobutadiene	ND	0.11	1.0	ug/L	1	5/4/2016 06:31 PM
Isopropylbenzene	6.2	0.034	1.0	ug/L	1	5/4/2016 06:31 PM
m,p-Xylene	170	0.024	1.0	ug/L	1	5/4/2016 06:31 PM
Methylene chloride	ND	0.28	2.0	ug/L	1	5/4/2016 06:31 PM
MTBE	6.0	0.062	1.0	ug/L	1	5/4/2016 06:31 PM
n-Butylbenzene	ND	0.031	1.0	ug/L	1	5/4/2016 06:31 PM
n-Propylbenzene	15	0.018	1.0	ug/L	1	5/4/2016 06:31 PM
Naphthalene	73	0.048	1.0	ug/L	1	5/4/2016 06:31 PM
o-Xylene	87	0.042	1.0	ug/L	1	5/4/2016 06:31 PM
sec-Butylbenzene	1.4	0.025	1.0	ug/L	1	5/4/2016 06:31 PM
Styrene	ND	0.035	1.0	ug/L	1	5/4/2016 06:31 PM
Tert-amyl methyl ether	ND	0.039	1.0	ug/L	1	5/4/2016 06:31 PM
Tert-Butanol	100	0.30	5.0	ug/L	1	5/4/2016 06:31 PM
tert-Butylbenzene	ND	0.030	1.0	ug/L	1	5/4/2016 06:31 PM
Tetrachloroethene	ND	0.16	1.0	ug/L	1	5/4/2016 06:31 PM
Toluene	83	0.042	2.0	ug/L	1	5/4/2016 06:31 PM
trans-1,2-Dichloroethene	ND	0.070	1.0	ug/L	1	5/4/2016 06:31 PM
trans-1,3-Dichloropropene	ND	0.039	1.0	ug/L	1	5/4/2016 06:31 PM
Trichloroethene	ND	0.12	1.0	ug/L	1	5/4/2016 06:31 PM
Trichlorofluoromethane	ND	0.031	1.0	ug/L	1	5/4/2016 06:31 PM
Vinyl chloride	ND	0.095	0.50	ug/L	1	5/4/2016 06:31 PM
Xylenes, Total	260	1.5	2.0	ug/L	1	5/4/2016 06:31 PM
Surr: 1,2-Dichloroethane-d4	99.7	0	72-119	%REC	10	5/4/2016 02:43 PM
Surr: 1,2-Dichloroethane-d4	97.9	0	72-119	%REC	1	5/4/2016 06:31 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CALIFORNIA
11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436

NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 11-May-16

CLIENT: CH2MHill
Lab Order: N019609
Project: SFPP - Norwalk Site
Lab ID: N019609-001

Client Sample ID: INF-05-03
Collection Date: 5/3/2016 9:55:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS5_160504A	QC Batch:	P16VW087	PrepDate:	Analyst:	RB	
Surr:	4-Bromofluorobenzene	102	0	76-119	%REC	10	5/4/2016 02:43 PM
Surr:	4-Bromofluorobenzene	101	0	76-119	%REC	1	5/4/2016 06:31 PM
Surr:	Dibromofluoromethane	104	0	85-115	%REC	1	5/4/2016 06:31 PM
Surr:	Dibromofluoromethane	106	0	85-115	%REC	10	5/4/2016 02:43 PM
Surr:	Toluene-d8	107	0	81-120	%REC	10	5/4/2016 02:43 PM
Surr:	Toluene-d8	105	0	81-120	%REC	1	5/4/2016 06:31 PM

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

RunID:	GC3_160505C	QC Batch:	57292	PrepDate:	5/4/2016	Analyst:	FJ
TPH-Diesel (C13-C22)	20000	310	510	ug/L	20	5/5/2016 03:27 PM	
TPH-Oil (C23-C36)	680	14	25	ug/L	1	5/5/2016 02:09 PM	
Surr: Octacosane	104	0	26-152	%REC	1	5/5/2016 02:09 PM	
Surr: p-Terphenyl	104	0	57-132	%REC	1	5/5/2016 02:09 PM	

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

RunID:	GC4_160505A	QC Batch:	E16VW031	PrepDate:	Analyst:	QBM
TPH-Gasoline (C4-C12)	2600	16	50	ug/L	1	5/5/2016 03:24 PM
Surr: Chlorobenzene - d5	76.9	0	74-138	%REC	1	5/5/2016 03:24 PM

TOTAL TPH

EPA 8015B

RunID:	GC3_160505C	QC Batch:	R108338	PrepDate:	Analyst:	FJ
Total TPH	23280	16	50	ug/L	1	5/5/2016 02:09 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
		Results are wet unless otherwise specified	DO	Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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CLIENT: CH2MHill
 Work Order: N019609
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT
 TestCode: 8015_W_FP_SFPP

Sample ID: MB-57292	Samp Type: MBLK	TestCode: 8015_W_FP_	Units: ug/L	Prep Date: 5/4/2016	RunNo: 108338						
Client ID: PBW	Batch ID: 57292	TestNo: EPA 8015B	EPA 3510C	Analysis Date: 5/5/2016	SeqNo: 2319453						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Diesel (C13-C22)	15.404	25									J
TPH-Oil (C23-C36)	15.271	25									J
Surr: Octacosane	81.954		80.00		102	26	152				
Surr: p-Terphenyl	78.120		80.00		97.6	57	132				

Qualifiers:

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 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values



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 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8015_W_SFPPTOT

Sample ID: MB-R108338	Samp Type: MBLK	TestCode: 8015_W_SFP	Units: ug/L
Client ID: PBW	Batch ID: R108338	TestNo: EPA 8015B	
Analyte	Result	PQL	SPK value
		%REC	LowLimit
		HighLimit	RPD Ref Val
		%RPD	RPDLimit
			Qual

RunNo: 108338
SeqNo: 2319457

Prep Date:
Analysis Date: 5/5/2016

Total TPH ND 50

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out
H	Holding times for preparation or analysis exceeded	R	RPD outside accepted recovery limits
			Calculations are based on raw values



ASSET LABORATORIES
ANALYTICAL LABORATORY SERVICES FOR ENVIRONMENTAL TECHNOLOGISTS

CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8015GAS_WSFPP

Sample ID: E160505LCS	SampType: LCS	TestCode: 8015GAS_WS	Units: ug/L
Client ID: LCSW	Batch ID: E16VW031	TestNo: EPA 8015B	Prep Date: 108268
			SeqNo: 2316227
Analyte	Result	PQL	SPK value
TPH-Gasoline (C4-C12)	860.000	50	1000
Surr: Chlorobenzene - d5	42933.000		50000
	%REC	LowLimit	HighLimit
	86.0	67	136
	85.9	74	138
		%RPD	RPDLimit
			Qual

Sample ID: E160505MB1	SampType: MBLK	TestCode: 8015GAS_WS	Units: ug/L
Client ID: PBW	Batch ID: E16VW031	TestNo: EPA 8015B	Prep Date: 108268
			SeqNo: 2316228
Analyte	Result	PQL	SPK value
TPH-Gasoline (C4-C12)	44.000	50	1000
Surr: Chlorobenzene - d5	45200.000		50000
	%REC	LowLimit	HighLimit
	90.4	74	138
		%RPD	RPDLimit
			Qual

Sample ID: N019608-001BMS	SampType: MS	TestCode: 8015GAS_WS	Units: ug/L
Client ID: ZZZZZ	Batch ID: E16VW031	TestNo: EPA 8015B	Prep Date: 108268
			SeqNo: 2316232
Analyte	Result	PQL	SPK value
TPH-Gasoline (C4-C12)	834.000	50	1000
Surr: Chlorobenzene - d5	43328.000		50000
	%REC	LowLimit	HighLimit
	80.2	67	136
	86.7	74	138
		%RPD	RPDLimit
			Qual

Sample ID: N019608-001BMSD	SampType: MSD	TestCode: 8015GAS_WS	Units: ug/L
Client ID: ZZZZZ	Batch ID: E16VW031	TestNo: EPA 8015B	Prep Date: 108268
			SeqNo: 2316233
Analyte	Result	PQL	SPK value
TPH-Gasoline (C4-C12)	871.000	50	1000
Surr: Chlorobenzene - d5	43029.000		50000
	%REC	LowLimit	HighLimit
	83.9	67	136
	86.1	74	138
		%RPD	RPDLimit
			Qual

Qualifiers:

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 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160504LCS	Samp Type: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108264						
Client ID: LCSW	Batch ID: P16VW087	TestNo: EPA 8260B		Analysis Date: 5/4/2016	SeqNo: 2316058						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	18.880	1.0	20.00	0	94.4	81	129				
1,1,1-Trichloroethane	19.310	1.0	20.00	0	96.6	67	132				
1,1,2,2-Tetrachloroethane	17.370	1.0	20.00	0	86.9	63	128				
1,1,2-Trichloroethane	19.460	1.0	20.00	0	97.3	75	125				
1,1-Dichloroethane	19.120	0.50	20.00	0	95.6	69	133				
1,1-Dichloroethene	17.300	1.0	20.00	0	86.5	68	130				
1,1-Dichloropropene	19.090	1.0	20.00	0	95.4	73	132				
1,2,3-Trichlorobenzene	19.740	1.0	20.00	0	98.7	67	137				
1,2,3-Trichloropropane	17.980	1.0	20.00	0	89.9	73	124				
1,2,4-Trichlorobenzene	20.470	1.0	20.00	0	102	66	134				
1,2,4-Trimethylbenzene	17.290	1.0	20.00	0	86.5	74	132				
1,2-Dibromo-3-chloropropane	18.330	2.0	20.00	0	91.7	50	132				
1,2-Dibromoethane	19.410	1.0	20.00	0	97.0	80	121				
1,2-Dichlorobenzene	18.790	1.0	20.00	0	94.0	71	122				
1,2-Dichloroethane	19.220	0.50	20.00	0	96.1	69	132				
1,2-Dichloropropane	18.420	1.0	20.00	0	92.1	75	125				
1,3,5-Trimethylbenzene	18.470	1.0	20.00	0	92.4	74	131				
1,3-Dichlorobenzene	17.850	1.0	20.00	0	89.2	75	124				
1,3-Dichloropropane	19.110	1.0	20.00	0	95.6	73	126				
1,4-Dichlorobenzene	19.000	1.0	20.00	0	95.0	74	123				
2,2-Dichloropropane	22.370	1.0	20.00	0	112	69	137				
2-Butanone	178.940	10	200.0	0	89.5	49	136				
2-Chlorotoluene	17.570	1.0	20.00	0	87.9	73	126				
4-Chlorotoluene	18.200	1.0	20.00	0	91.0	74	128				
4-Isopropyltoluene	18.140	1.0	20.00	0	90.7	73	130				
4-Methyl-2-pentanone	184.490	10	200.0	0	92.2	58	134				
Acetone	155.360	10	200.0	0	77.7	40	135				
Benzene	18.950	1.0	20.00	0	94.8	81	122				
Bromobenzene	18.150	1.0	20.00	0	90.8	76	124				
Bromochloromethane	18.400	1.0	20.00	0	92.0	65	129				

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160504LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108264						
Client ID: LCSW	Batch ID: P16VW087	TestNo: EPA 8260B		Analysis Date: 5/4/2016	SeqNo: 2316058						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	17.920	1.0	20.00	0	89.6	76	121				
Bromoform	20.070	1.0	20.00	0	100	69	128				
Bromomethane	11.770	1.0	20.00	0	58.8	53	141				
Carbon disulfide	16.390	1.0	20.00	0	82.0	75	125				
Carbon tetrachloride	19.920	0.50	20.00	0	99.6	66	138				
Chlorobenzene	18.610	1.0	20.00	0	93.0	81	122				
Chloroethane	15.930	1.0	20.00	0	79.6	58	133				
Chloroform	19.070	1.0	20.00	0	95.4	69	128				
Chloromethane	15.030	1.0	20.00	0	75.2	56	131				
cis-1,2-Dichloroethene	19.280	1.0	20.00	0	96.4	72	126				
cis-1,3-Dichloropropene	19.080	1.0	20.00	0	95.4	69	131				
Di-isopropyl ether	17.180	1.0	20.00	0	85.9	70	130				
Dibromochloromethane	20.010	1.0	20.00	0	100	66	133				
Dibromomethane	18.370	1.0	20.00	0	91.9	76	125				
Dichlorodifluoromethane	9.250	1.0	20.00	0	46.2	53	153				S
Ethyl tert-butyl ether	18.020	1.0	20.00	0	90.1	70	130				
Ethylbenzene	18.710	1.0	20.00	0	93.6	73	127				
Freon-113	15.920	1.0	20.00	0	79.6	75	125				
Hexachlorobutadiene	19.420	1.0	20.00	0	97.1	67	131				
Isopropylbenzene	16.730	1.0	20.00	0	83.6	75	127				
m,p-Xylene	37.620	1.0	40.00	0	94.1	76	128				
Methylene chloride	19.530	2.0	20.00	0	97.6	63	137				
MTBE	17.030	1.0	20.00	0	85.2	65	123				
n-Butylbenzene	17.570	1.0	20.00	0	87.9	69	137				
n-Propylbenzene	17.640	1.0	20.00	0	88.2	72	129				
Naphthalene	17.580	1.0	20.00	0	87.9	54	138				
o-Xylene	18.140	1.0	20.00	0	90.7	80	121				
sec-Butylbenzene	18.010	1.0	20.00	0	90.1	72	127				
Styrene	19.230	1.0	20.00	0	96.2	65	134				
Tert-amyl methyl ether	17.970	1.0	20.00	0	89.8	70	130				

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160504LCS		Samp Type: LCS		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 108264	
Client ID: LCSW		Batch ID: P16VW087		TestNo: EPA 8260B		Analysis Date: 5/4/2016		SeqNo: 2316058			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tert-Butanol	98.260	5.0	100.0	0	98.3	70	130				
tert-Butylbenzene	17.480	1.0	20.00	0	87.4	70	129				
Tetrachloroethene	18.250	1.0	20.00	0	91.2	66	128				
Toluene	18.900	2.0	20.00	0	94.5	77	122				
trans-1,2-Dichloroethene	18.520	1.0	20.00	0	92.6	63	137				
trans-1,3-Dichloropropene	18.530	1.0	20.00	0	92.6	59	135				
Trichloroethene	20.090	1.0	20.00	0	100	70	127				
Trichlorofluoromethane	18.180	1.0	20.00	0	90.9	57	129				
Vinyl chloride	14.970	0.50	20.00	0	74.9	50	134				
Xylenes, Total	55.760	2.0	60.00	0	92.9	75	125				
Surr: 1,2-Dichloroethane-d4	23.920		25.00		95.7	72	119				
Surr: 4-Bromofluorobenzene	24.540		25.00		98.2	76	119				
Surr: Dibromofluoromethane	25.790		25.00		103	85	115				
Surr: Toluene-d8	24.220		25.00		96.9	81	120				

Sample ID: P160504LCS		Samp Type: LCS		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 108264	
Client ID: LCSS02		Batch ID: P16VW087		TestNo: EPA 8260B		Analysis Date: 5/4/2016		SeqNo: 2316059			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	18.880	1.0	20.00	0	94.4	81	129	18.88	0	20	
1,1,1-Trichloroethane	19.580	1.0	20.00	0	97.9	67	132	19.31	1.39	20	
1,1,2,2-Tetrachloroethane	17.640	1.0	20.00	0	88.2	63	128	17.37	1.54	20	
1,1,2-Trichloroethane	20.350	1.0	20.00	0	102	75	125	19.46	4.47	20	
1,1-Dichloroethane	19.100	0.50	20.00	0	95.5	69	133	19.12	0.105	20	
1,1-Dichloroethene	18.020	1.0	20.00	0	90.1	68	130	17.30	4.08	20	
1,1-Dichloropropene	19.750	1.0	20.00	0	98.8	73	132	19.09	3.40	20	
1,2,3-Trichlorobenzene	19.190	1.0	20.00	0	96.0	67	137	19.74	2.83	20	
1,2,3-Trichloropropane	17.920	1.0	20.00	0	89.6	73	124	17.98	0.334	20	
1,2,4-Trichlorobenzene	20.430	1.0	20.00	0	102	66	134	20.47	0.196	20	
1,2,4-Trimethylbenzene	17.710	1.0	20.00	0	88.6	74	132	17.29	2.40	20	

Qualifiers:

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 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160504LCSD	SampType: LCSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108264						
Client ID: LCSS02	Batch ID: P16VW087	TestNo: EPA 8260B		Analysis Date: 5/4/2016	SeqNo: 2316059						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	17.090	2.0	20.00	0	85.4	50	132	18.33	7.00	20	
1,2-Dibromoethane	20.400	1.0	20.00	0	102	80	121	19.41	4.97	20	
1,2-Dichlorobenzene	18.410	1.0	20.00	0	92.0	71	122	18.79	2.04	20	
1,2-Dichloroethane	19.790	0.50	20.00	0	99.0	69	132	19.22	2.92	20	
1,2-Dichloropropane	18.700	1.0	20.00	0	93.5	75	125	18.42	1.51	20	
1,3,5-Trimethylbenzene	18.410	1.0	20.00	0	92.0	74	131	18.47	0.325	20	
1,3-Dichlorobenzene	17.810	1.0	20.00	0	89.0	75	124	17.85	0.224	20	
1,3-Dichloropropane	19.640	1.0	20.00	0	98.2	73	126	19.11	2.74	20	
1,4-Dichlorobenzene	18.990	1.0	20.00	0	95.0	74	123	19.00	0.0526	20	
2,2-Dichloropropane	22.810	1.0	20.00	0	114	69	137	22.37	1.95	20	
2-Butanone	178.670	10	200.0	0	89.3	49	136	178.9	0.151	20	
2-Chlorotoluene	17.190	1.0	20.00	0	86.0	73	126	17.57	2.19	20	
4-Chlorotoluene	17.970	1.0	20.00	0	89.8	74	128	18.20	1.27	20	
4-Isopropyltoluene	18.340	1.0	20.00	0	91.7	73	130	18.14	1.10	20	
4-Methyl-2-pentanone	204.020	10	200.0	0	102	58	134	184.5	10.1	20	
Acetone	146.130	10	200.0	0	73.1	40	135	155.4	6.12	20	
Benzene	19.310	1.0	20.00	0	96.6	81	122	18.95	1.88	20	
Bromobenzene	17.800	1.0	20.00	0	89.0	76	124	18.15	1.95	20	
Bromochloromethane	17.710	1.0	20.00	0	88.6	65	129	18.40	3.82	20	
Bromodichloromethane	19.560	1.0	20.00	0	97.8	76	121	17.92	8.75	20	
Bromoform	20.380	1.0	20.00	0	102	69	128	20.07	1.53	20	
Bromomethane	11.680	1.0	20.00	0	58.4	53	141	11.77	0.768	20	
Carbon disulfide	16.060	1.0	20.00	0	80.3	75	125	16.39	2.03	20	
Carbon tetrachloride	20.240	0.50	20.00	0	101	66	138	19.92	1.59	20	
Chlorobenzene	18.720	1.0	20.00	0	93.6	81	122	18.61	0.589	20	
Chloroethane	16.310	1.0	20.00	0	81.6	58	133	15.93	2.36	20	
Chloroform	19.430	1.0	20.00	0	97.2	69	128	19.07	1.87	20	
Chloromethane	15.970	1.0	20.00	0	79.8	56	131	15.03	6.06	20	
cis-1,2-Dichloroethene	19.010	1.0	20.00	0	95.1	72	126	19.28	1.41	20	
cis-1,3-Dichloropropene	20.540	1.0	20.00	0	103	69	131	19.08	7.37	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160504LCSD	SampType: LCSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108264						
Client ID: LCSS02	Batch ID: P16VW087	TestNo: EPA 8260B		Analysis Date: 5/4/2016	SeqNo: 2316059						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diisopropyl ether	17.930	1.0	20.00	0	89.7	70	130	17.18	4.27	20	
Dibromochloromethane	19.320	1.0	20.00	0	96.6	66	133	20.01	3.51	20	
Dibromomethane	20.240	1.0	20.00	0	101	76	125	18.37	9.69	20	
Dichlorodifluoromethane	9.950	1.0	20.00	0	49.8	53	153	9.250	7.29	20	S
Ethyl tert-butyl ether	18.470	1.0	20.00	0	92.4	70	130	18.02	2.47	20	
Ethylbenzene	18.620	1.0	20.00	0	93.1	73	127	18.71	0.482	20	
Freon-113	16.200	1.0	20.00	0	81.0	75	125	15.92	1.74	20	
Hexachlorobutadiene	19.600	1.0	20.00	0	98.0	67	131	19.42	0.923	20	
Isopropylbenzene	17.360	1.0	20.00	0	86.8	75	127	16.73	3.70	20	
m,p-Xylene	38.130	1.0	40.00	0	95.3	76	128	37.62	1.35	20	
Methylene chloride	20.660	2.0	20.00	0	103	63	137	19.53	5.62	20	
MTBE	17.710	1.0	20.00	0	88.6	65	123	17.03	3.91	20	
n-Butylbenzene	18.160	1.0	20.00	0	90.8	69	137	17.57	3.30	20	
n-Propylbenzene	17.330	1.0	20.00	0	86.7	72	129	17.64	1.77	20	
Naphthalene	17.670	1.0	20.00	0	88.4	54	138	17.58	0.511	20	
o-Xylene	18.700	1.0	20.00	0	93.5	80	121	18.14	3.04	20	
sec-Butylbenzene	18.140	1.0	20.00	0	90.7	72	127	18.01	0.719	20	
Styrene	19.170	1.0	20.00	0	95.9	65	134	19.23	0.313	20	
Tert-amyl methyl ether	18.710	1.0	20.00	0	93.6	70	130	17.97	4.03	20	
Tert-Butanol	110.300	5.0	100.0	0	110	70	130	98.26	11.5	20	
tert-Butylbenzene	17.980	1.0	20.00	0	89.9	70	129	17.48	2.82	20	
Tetrachloroethene	18.240	1.0	20.00	0	91.2	66	128	18.25	0.0548	20	
Toluene	20.010	2.0	20.00	0	100	77	122	18.90	5.71	20	
trans-1,2-Dichloroethene	18.510	1.0	20.00	0	92.6	63	137	18.52	0.0540	20	
trans-1,3-Dichloropropene	19.310	1.0	20.00	0	96.6	59	135	18.53	4.12	20	
Trichloroethene	19.860	1.0	20.00	0	99.3	70	127	20.09	1.15	20	
Trichlorofluoromethane	18.740	1.0	20.00	0	93.7	57	129	18.18	3.03	20	
Vinyl chloride	15.340	0.50	20.00	0	76.7	50	134	14.97	2.44	20	
Xylenes, Total	56.830	2.0	60.00	0	94.7	75	125	55.76	1.90	20	
Surr: 1,2-Dichloroethane-d4	25.700		25.00		103	72	119		0		

Qualifiers:

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 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160504LCSD	SampType: LCSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108264
Client ID: LCSS02	Batch ID: P16VW087	TestNo: EPA 8260B		Analysis Date: 5/4/2016	SeqNo: 2316059

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	25.190		25.00		101	76	119				0
Surr: Dibromofluoromethane	27.300		25.00		109	85	115				0
Surr: Toluene-d8	26.180		25.00		105	81	120				0

Sample ID: P160504MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108264
Client ID: PBW	Batch ID: P16VW087	TestNo: EPA 8260B		Analysis Date: 5/4/2016	SeqNo: 2316062

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	1.0									
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	1.0									
1,1-Dichloropropene	ND	1.0									
1,2,3-Trichlorobenzene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2,4-Trichlorobenzene	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,2-Dibromo-3-chloropropane	ND	2.0									
1,2-Dibromoethane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2,2-Dichloropropane	ND	1.0									
2-Butanone	ND	10									

Qualifiers:

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 - DO Surrogate Diluted Out
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 - R RPD outside accepted recovery limits
- Calculations are based on raw values

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160504MB3	Samp Type: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108264
Client ID: PBW	Batch ID: P16VW087	TestNo: EPA 8260B		Analysis Date: 5/4/2016	SeqNo: 2316062

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	ND	1.0									
4-Chlorotoluene	ND	1.0									
4-Isopropyltoluene	ND	1.0									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	1.0									
Bromobenzene	ND	1.0									
Bromochloromethane	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	1.0									
Carbon disulfide	0.070	1.0									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Chloromethane	ND	1.0									
cis-1,2-Dichloroethene	ND	1.0									
cis-1,3-Dichloropropene	ND	1.0									
Di-isopropyl ether	ND	1.0									
Dibromochloromethane	ND	1.0									
Dibromomethane	ND	1.0									
Dichlorodifluoromethane	ND	1.0									
Ethyl tert-butyl ether	ND	1.0									
Ethylbenzene	ND	1.0									
Freon-113	ND	1.0									
Hexachlorobutadiene	ND	1.0									
Isopropylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
Methylene chloride	0.480	2.0									J

Qualifiers:

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ASSET LABORATORIES
ANALYTICAL SERVICES LIMITED FOR ENVIRONMENTAL TECHNOLOGISTS

11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436

NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N019609
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160504MB3	Samp Type: MBLK	TestCode: 8260_WP_SF	Units: ug/L
Client ID: PBW	Batch ID: P16VW087	TestNo: EPA 8260B	Prep Date:
Analyte	Result	PQL	SPK value
			SPK Ref Val
		%REC	LowLimit
			HighLimit
			RPD Ref Val
			%RPD
			RPDLimit
			Qual

RunNo: 108264
SeqNo: 2316062

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	ND	1.0									
n-Butylbenzene	ND	1.0									
n-Propylbenzene	ND	1.0									
Naphthalene	ND	1.0									
o-Xylene	ND	1.0									
sec-Butylbenzene	ND	1.0									
Styrene	ND	1.0									
Tert-amyl methyl ether	ND	1.0									
Tert-Butanol	ND	5.0									
tert-Butylbenzene	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	2.0									
trans-1,2-Dichloroethene	ND	1.0									
trans-1,3-Dichloropropene	ND	1.0									
Trichloroethene	ND	1.0									
Trichlorofluoromethane	ND	1.0									
Vinyl chloride	ND	0.50									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-q4	25.310		25.00		101	72			119		
Surr: 4-Bromofluorobenzene	24.590		25.00		98.4	76			119		
Surr: Dibromofluoromethane	26.910		25.00		108	85			115		
Surr: Toluene-d8	26.100		25.00		104	81			120		

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
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S Spike/Surrogate outside of limits due to matrix interference	DO Surrogate Diluted Out	Calculations are based on raw values











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 P: 562.219.7435 F: 562.219.7436
 NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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CHAIN OF CUSTODY RECORD

DATE: 5/3/16
PAGE: 1 OF 1

Advanced Technology Laboratories
3151 W. Post Road
Las Vegas, NV 89118
Tel: 702-307-2659 Fax: 702-307-2691
Marlon Cartin (marlon@atl-labs.com)

LABORATORY CLIENT: Kinder Morgan Energy Partners, Attn: Steve Defibaugh 1100 Town & Country Road Orange, CA 92868 TEL: <u>714-560-4802</u> FAX: <u>714-560-4801</u> E-MAIL: <u>James.dye@kindermorgan.com</u> <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL / / SPECIAL INSTRUCTIONS Report to D. Jablonski/CH2M HILL, cc: KIMEP Direct Bill KIMEP/SFPP - Steve Defibaugh-ref. AFE# 81195 "J" flags required/Use lowest possible detection limit - all methods.	CLIENT PROJECT NAME/NUMBER: SFPP - Norwalk Site PROJECT CONTACT: James Dye SAMPLER(S): (SIGNATURE) 	P.O. NO.: QUOTE NO.: LAB USE ONLY 	REQUESTED ANALYSIS T: 4.80C DR # 2
Relinquished by (Signature)  5-3-16 17:00 Relinquished by (Signature)  Relinquished by (Signature) 	Relinquished by (Signature)  Relinquished by (Signature)  Relinquished by (Signature) 	Date: 5-3-16 Time: 16:11 Date: 5/4/16 Time: 8:10 am Date: _____ Time: _____	Comments

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 5/4/2016 Workorder: N019609
 Rep sample Temp (Deg C): 4.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: Golden State Overnight
 Last 4 digits of Tracking No.: 4440 Packing Material Used: Bubble Wrap
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed By: YR YR For: 5/8/2016

Reviewed By: [Signature] 05/10/16

ASSET Laboratories

WORK ORDER Summary

04-May-16

WorkOrder: N019609

Client ID: CH2HI03

Project: SFPP - Norwalk Site

QC Level: RTNE

Date Received: 5/4/2016

Comments: Report to D. Jablonski/CH2M HILL, cc:KMEP

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N019609-001A	INF-05-03	5/3/2016 9:55:00 AM	5/11/2016	Wastewater	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
			5/11/2016		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
N019609-001B			5/11/2016		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			5/11/2016		EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			5/11/2016		EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N019609-002A	FOLDER		5/11/2016		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB



800-322-5555 www.gso.com

Ship From
ASSET LABORATORIES
MOLKY BRAR
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Tracking #: 531804440

CPS



Ship To
ATL INC
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

LVS
LAS VEGAS

A

COD: \$0.00
Weight: 0 lb(s)
Reference:

C89102A

Delivery Instructions:
HOLD FOR PICK UP
Signature Type: REQUIRED



51402337

Print Date: 5/3/2016 5:32 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

4.8°C
JR# 2

June 21, 2016

Dan Jablonski
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

TEL:
FAX:

Workorder No.: N020072

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on June 14, 2016 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Ribicco For

Puri Romualdo
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Project: SFPP - Norwalk Site
Lab Order: N020072

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.



CLIENT: CH2MHill
Project: SFPP - Norwalk Site
Lab Order: N020072
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N020072-001A	INF-06-14	Wastewater	6/14/2016 1:10:00 PM	6/14/2016	6/21/2016
N020072-001B	INF-06-14	Wastewater	6/14/2016 1:10:00 PM	6/14/2016	6/21/2016



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 21-Jun-16

CLIENT: CH2MHill
Lab Order: N020072
Project: SFPP - Norwalk Site
Lab ID: N020072-001

Client Sample ID: INF-06-14
Collection Date: 6/14/2016 1:10:00 PM
Matrix: WASTEWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_160615A	QC Batch: P16VW120	PrepDate	Analyst: RB		
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,1,1-Trichloroethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,1,2-Trichloroethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,1-Dichloroethane	ND	0.50	ug/L	1	6/15/2016 08:15 PM
1,1-Dichloroethene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,1-Dichloropropene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,2,3-Trichloropropane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,2,4-Trimethylbenzene	110	10	ug/L	10	6/15/2016 01:28 PM
1,2-Dibromo-3-chloropropane	ND	2.0	ug/L	1	6/15/2016 08:15 PM
1,2-Dibromoethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,2-Dichlorobenzene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,2-Dichloroethane	ND	0.50	ug/L	1	6/15/2016 08:15 PM
1,2-Dichloropropane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,3,5-Trimethylbenzene	58	1.0	ug/L	1	6/15/2016 08:15 PM
1,3-Dichlorobenzene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,3-Dichloropropane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
1,4-Dichlorobenzene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
2,2-Dichloropropane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
2-Butanone	ND	10	ug/L	1	6/15/2016 08:15 PM
2-Chlorotoluene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
4-Chlorotoluene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
4-Isopropyltoluene	1.2	1.0	ug/L	1	6/15/2016 08:15 PM
4-Methyl-2-pentanone	ND	10	ug/L	1	6/15/2016 08:15 PM
Acetone	6.8	10	J ug/L	1	6/15/2016 08:15 PM
Benzene	290	10	ug/L	10	6/15/2016 01:28 PM
Bromobenzene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Bromochloromethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Bromodichloromethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Bromoform	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Bromomethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Carbon disulfide	0.18	1.0	J ug/L	1	6/15/2016 08:15 PM
Carbon tetrachloride	ND	0.50	ug/L	1	6/15/2016 08:15 PM
Chlorobenzene	ND	1.0	ug/L	1	6/15/2016 08:15 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix
Results are wet unless otherwise specified DO Surrogate Diluted Out



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CALIFORNIA
11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436

NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

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ANALYTICAL RESULTS

Print Date: 21-Jun-16

CLIENT: CH2MHill
Lab Order: N020072
Project: SFPP - Norwalk Site
Lab ID: N020072-001

Client Sample ID: INF-06-14
Collection Date: 6/14/2016 1:10:00 PM
Matrix: WASTEWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_160615A	QC Batch: P16VW120	PrepDate	Analyst: RB		
Chloroethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Chloroform	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Chloromethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
cis-1,3-Dichloropropene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Di-isopropyl ether	6.0	1.0	ug/L	1	6/15/2016 08:15 PM
Dibromochloromethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Dibromomethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Dichlorodifluoromethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Ethyl tert-butyl ether	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Ethylbenzene	21	1.0	ug/L	1	6/15/2016 08:15 PM
Freon-113	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Hexachlorobutadiene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Isopropylbenzene	3.9	1.0	ug/L	1	6/15/2016 08:15 PM
m,p-Xylene	230	10	ug/L	10	6/15/2016 01:28 PM
Methylene chloride	ND	2.0	ug/L	1	6/15/2016 08:15 PM
MTBE	8.6	1.0	ug/L	1	6/15/2016 08:15 PM
n-Butylbenzene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
n-Propylbenzene	7.6	1.0	ug/L	1	6/15/2016 08:15 PM
Naphthalene	55	1.0	ug/L	1	6/15/2016 08:15 PM
o-Xylene	170	10	ug/L	10	6/15/2016 01:28 PM
sec-Butylbenzene	1.8	1.0	ug/L	1	6/15/2016 08:15 PM
Styrene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Tert-amyl methyl ether	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Tert-Butanol	ND	5.0	ug/L	1	6/15/2016 08:15 PM
tert-Butylbenzene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Tetrachloroethene	0.44	1.0	ug/L	1	6/15/2016 08:15 PM
Toluene	110	20	ug/L	10	6/15/2016 01:28 PM
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
trans-1,3-Dichloropropene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Trichloroethene	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Trichlorofluoromethane	ND	1.0	ug/L	1	6/15/2016 08:15 PM
Vinyl chloride	ND	0.50	ug/L	1	6/15/2016 08:15 PM
Xylenes, Total	400	20	ug/L	10	6/15/2016 01:28 PM
Surr: 1,2-Dichloroethane-d4	99.6	72-119	%REC	10	6/15/2016 01:28 PM
Surr: 1,2-Dichloroethane-d4	97.8	72-119	%REC	1	6/15/2016 08:15 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix
Results are wet unless otherwise specified DO Surrogate Diluted Out



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CALIFORNIA
11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436

NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

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ANALYTICAL RESULTS

Print Date: 21-Jun-16

CLIENT: CH2MHill
Lab Order: N020072
Project: SFPP - Norwalk Site
Lab ID: N020072-001

Client Sample ID: INF-06-14
Collection Date: 6/14/2016 1:10:00 PM
Matrix: WASTEWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS5_160615A	QC Batch:	P16VW120	PrepDate	Analyst:	RB
Surr:	4-Bromofluorobenzene	104	76-119	%REC	10	6/15/2016 01:28 PM
Surr:	4-Bromofluorobenzene	104	76-119	%REC	1	6/15/2016 08:15 PM
Surr:	Dibromofluoromethane	101	85-115	%REC	1	6/15/2016 08:15 PM
Surr:	Dibromofluoromethane	102	85-115	%REC	10	6/15/2016 01:28 PM
Surr:	Toluene-d8	102	81-120	%REC	1	6/15/2016 08:15 PM
Surr:	Toluene-d8	97.5	81-120	%REC	10	6/15/2016 01:28 PM

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

RunID:	GC3_160617A	QC Batch:	58754	PrepDate	6/16/2016	Analyst:	FJ
TPH-Diesel (C13-C22)	4400	26	ug/L	1	6/17/2016 02:49 PM		
TPH-Oil (C23-C36)	280	26	ug/L	1	6/17/2016 02:49 PM		
Surr: Octacosane	97.7	26-152	%REC	1	6/17/2016 02:49 PM		
Surr: p-Terphenyl	91.0	57-132	%REC	1	6/17/2016 02:49 PM		

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

RunID:	GC4_160620A	QC Batch:	E16VW039	PrepDate	Analyst:	QBM
TPH-Gasoline (C4-C12)	1900	50	ug/L	1	6/20/2016	
Surr: Chlorobenzene - d5	88.3	74-138	%REC	1	6/20/2016	

TOTAL TPH

EPA 8015B

RunID:	GC3_160617A	QC Batch:	R109024	PrepDate	Analyst:	FJ
Total TPH	6580	50	ug/L	1	6/17/2016	

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix
		Results are wet unless otherwise specified	DO	Surrogate Diluted Out



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 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436

NEVADA
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 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8015_W_FP_SFPP

Sample ID: **MB-58754** SampType: **MBLK** TestCode: **8015_W_FP_** Units: **ug/L** Prep Date: **6/16/2016** RunNo: **109024**
 Client ID: **PBW** Batch ID: **58754** TestNo: **EPA 8015B** EPA **3510C** Analysis Date: **6/17/2016** SeqNo: **2354952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel (C13-C22)	ND	25									J
TPH-Oil (C23-C36)	24.200	25									
Surr: Octacosane	76.287		80.00		95.4	26	152				
Surr: p-Terphenyl	71.952		80.00		89.9	57	132				

Qualifiers:

- B Analyte detected in the associated Method Blank
 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values



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 P: 562.219.7435 F: 562.219.7436 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

CLIENT: CH2Mhill
 Work Order: N020072
 Project: SFPP - Norwalk Site

Sample ID: MB-R109024	SampType: MBLK	TestCode: 8015_W_SFP	Units: ug/L
Client ID: PBW	Batch ID: R109024	TestNo: EPA 8015B	
Analyte	Result	PQL	SPK value
		%REC	LowLimit
		HighLimit	RPD Ref Val
		%RPD	RPDLimit
			Qual
Total TPH	ND	50	

RunNo: 109024
 SeqNo: 2354955
 Prep Date:
 Analysis Date: 6/17/2016

Qualifiers:

- B Analyte detected in the associated Method Blank
 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values



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 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436
 NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

CLIENT: CH2MHill
 Work Order: N020072
 Project: SFPP - Norwalk Site

Sample ID	E160620LCS	SampType: LCS	TestCode: 8015GAS_W	Units: ug/L	Prep Date:	RunNo: 109046					
Client ID:	LCSW	Batch ID: E16VW039	TestNo: EPA 8015B		Analysis Date: 6/20/2016	SeqNo: 2355667					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	900.000	50	1000	0	90.0	67	136				
Surr: Chlorobenzene - d5	46757.000		50000		93.5	74	138				

Sample ID	E160620MB2	SampType: MBLK	TestCode: 8015GAS_W	Units: ug/L	Prep Date:	RunNo: 109046					
Client ID:	PBW	Batch ID: E16VW039	TestNo: EPA 8015B		Analysis Date: 6/20/2016	SeqNo: 2355668					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	44.000	50	1000		103	74	138				J
Surr: Chlorobenzene - d5	51662.000		50000								

Sample ID	N020073-001JMS	SampType: MS	TestCode: 8015GAS_W	Units: ug/L	Prep Date:	RunNo: 109046					
Client ID:	ZZZZZ	Batch ID: E16VW039	TestNo: EPA 8015B		Analysis Date: 6/20/2016	SeqNo: 2355671					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	884.000	50	1000	44.00	84.0	67	136				
Surr: Chlorobenzene - d5	47096.000		50000		94.2	74	138				

Sample ID	N020073-001JMSD	SampType: MSD	TestCode: 8015GAS_W	Units: ug/L	Prep Date:	RunNo: 109046					
Client ID:	ZZZZZ	Batch ID: E16VW039	TestNo: EPA 8015B		Analysis Date: 6/20/2016	SeqNo: 2355672					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	862.000	50	1000	44.00	81.8	67	136	884.0	2.52	30	
Surr: Chlorobenzene - d5	45661.000		50000		91.3	74	138		0	0	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values



CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160615LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	RunNo: 108981							
Client ID: LCSW	Batch ID: P16VW120	TestNo: EPA 8260B		SeqNo: 2352905							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.860	1.0	20.00	0	109	81	129				
1,1,1-Trichloroethane	18.320	1.0	20.00	0	91.6	67	132				
1,1,2,2-Tetrachloroethane	20.830	1.0	20.00	0	104	63	128				
1,1,2-Trichloroethane	21.250	1.0	20.00	0	106	75	125				
1,1-Dichloroethane	15.290	0.50	20.00	0	76.5	69	133				
1,1-Dichloroethene	14.510	1.0	20.00	0	72.6	68	130				
1,1-Dichloropropene	19.350	1.0	20.00	0	96.8	73	132				
1,2,3-Trichlorobenzene	22.840	1.0	20.00	0	114	67	137				
1,2,3-Trichloropropane	21.880	1.0	20.00	0	109	73	124				
1,2,4-Trichlorobenzene	19.130	1.0	20.00	0	95.7	66	134				
1,2,4-Trimethylbenzene	22.080	1.0	20.00	0	110	74	132				
1,2-Dibromo-3-chloropropane	21.340	2.0	20.00	0	107	50	132				
1,2-Dibromoethane	21.530	1.0	20.00	0	108	80	121				
1,2-Dichlorobenzene	20.660	1.0	20.00	0	103	71	122				
1,2-Dichloroethane	19.960	0.50	20.00	0	99.8	69	132				
1,2-Dichloropropane	19.970	1.0	20.00	0	99.8	75	125				
1,3,5-Trimethylbenzene	21.790	1.0	20.00	0	109	74	131				
1,3-Dichlorobenzene	21.510	1.0	20.00	0	108	75	124				
1,3-Dichloropropane	21.460	1.0	20.00	0	107	73	126				
1,4-Dichlorobenzene	20.470	1.0	20.00	0	102	74	123				
2,2-Dichloropropane	18.030	1.0	20.00	0	90.2	69	137				
2-Butanone	194.790	10	200.0	0	97.4	49	136				
2-Chlorotoluene	20.950	1.0	20.00	0	105	73	126				
4-Chlorotoluene	21.970	1.0	20.00	0	110	74	128				
4-Isopropyltoluene	21.400	1.0	20.00	0	107	73	130				
4-Methyl-2-pentanone	232.900	10	200.0	0	116	58	134				
Acetone	151.270	10	200.0	0	75.6	40	135				
Benzene	18.120	1.0	20.00	0	90.6	81	122				
Bromobenzene	20.510	1.0	20.00	0	103	76	124				
Bromochloromethane	17.930	1.0	20.00	0	89.7	65	129				

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Calculations are based on raw values



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 CALIFORNIA NEVADA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703 3151 W. Post Rd., Las Vegas, NV 89118
 P: 562.219.7435 F: 562.219.7436 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160615LCS **SampType:** LCS **TestCode:** 8260_WP_SF **Units:** ug/L **Prep Date:** **RunNo:** 108981
Client ID: LCSW **Batch ID:** P16VW120 **TestNo:** EPA 8260B **Analysis Date:** 6/15/2016 **SeqNo:** 2352905

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	19.280	1.0	20.00	0	96.4	76	121				
Bromoform	21.720	1.0	20.00	0	109	69	128				
Bromomethane	15.810	1.0	20.00	0	79.0	53	141				
Carbon disulfide	15.290	1.0	20.00	0	76.5	75	125				
Carbon tetrachloride	18.580	0.50	20.00	0	92.9	66	138				
Chlorobenzene	20.390	1.0	20.00	0	102	81	122				
Chloroethane	18.170	1.0	20.00	0	90.9	58	133				
Chloroform	18.040	1.0	20.00	0	90.2	69	128				
Chloromethane	15.910	1.0	20.00	0	79.6	56	131				
cis-1,2-Dichloroethene	16.870	1.0	20.00	0	84.4	72	126				
cis-1,3-Dichloropropene	21.990	1.0	20.00	0	110	69	131				
Di-isopropyl ether	15.780	1.0	20.00	0	78.9	70	130				
Dibromochloromethane	20.910	1.0	20.00	0	105	66	133				
Dibromomethane	19.160	1.0	20.00	0	95.8	76	125				
Dichlorodifluoromethane	14.450	1.0	20.00	0	72.3	53	153				
Ethyl tert-butyl ether	15.600	1.0	20.00	0	78.0	70	130				
Ethylbenzene	20.200	1.0	20.00	0	101	73	127				
Freon-113	15.750	1.0	20.00	0	78.8	75	125				
Hexachlorobutadiene	19.700	1.0	20.00	0	98.5	67	131				
Isopropylbenzene	20.750	1.0	20.00	0	104	75	127				
m,p-Xylene	43.260	1.0	40.00	0	108	76	128				
Methylene chloride	16.630	2.0	20.00	0	83.2	63	137				
MTBE	17.010	1.0	20.00	0	85.0	65	123				
n-Butylbenzene	20.060	1.0	20.00	0	100	69	137				
n-Propylbenzene	21.010	1.0	20.00	0	105	72	129				
Naphthalene	18.760	1.0	20.00	0	93.8	54	138				
o-Xylene	21.550	1.0	20.00	0	108	80	121				
sec-Butylbenzene	21.500	1.0	20.00	0	108	72	127				
Styrene	24.440	1.0	20.00	0	122	65	134				
Tert-amyl methyl ether	18.830	1.0	20.00	0	94.2	70	130				

Qualifiers:
 B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits
 Calculations are based on raw values



ASSET LABORATORIES
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436
 CALIFORNIA NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

Serving Clients with Passion and Professionalism

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID	P160615LCS	SampType:	LCS	TestCode:	8260_WP_SF	Units:	ug/L	Prep Date:	RunNo:	108981	
Client ID:	LCSW	Batch ID:	P16VW120	TestNo:	EPA 8260B			Analysis Date:	SeqNo:	2352905	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tert-Butanol	93.530	5.0	100.0	0	93.5	70	130				
tert-Butylbenzene	22.160	1.0	20.00	0	111	70	129				
Tetrachloroethene	19.820	1.0	20.00	0	99.1	66	128				
Toluene	19.750	2.0	20.00	0	98.8	77	122				
trans-1,2-Dichloroethene	15.900	1.0	20.00	0	79.5	63	137				
trans-1,3-Dichloropropene	22.290	1.0	20.00	0	111	59	135				
Trichloroethene	18.970	1.0	20.00	0	94.8	70	127				
Trichlorofluoromethane	17.780	1.0	20.00	0	88.9	57	129				
Vinyl chloride	16.100	0.50	20.00	0	80.5	50	134				
Xylenes, Total	64.810	2.0	60.00	0	108	75	125				
Surr: 1,2-Dichloroethane-d4	25.760		25.00		103	72	119				
Surr: 4-Bromofluorobenzene	25.750		25.00		103	76	119				
Surr: Dibromofluoromethane	25.550		25.00		102	85	115				
Surr: Toluene-d8	25.640		25.00		103	81	120				

Sample ID	P160615LCS	SampType:	LCS	TestCode:	8260_WP_SF	Units:	ug/L	Prep Date:	RunNo:	108981	
Client ID:	LCS02	Batch ID:	P16VW120	TestNo:	EPA 8260B			Analysis Date:	SeqNo:	2352906	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	22.210	1.0	20.00	0	111	81	129	21.86	1.59	20	
1,1,1-Trichloroethane	18.680	1.0	20.00	0	93.4	67	132	18.32	1.95	20	
1,1,2,2-Tetrachloroethane	21.590	1.0	20.00	0	108	63	128	20.83	3.58	20	
1,1,2-Trichloroethane	21.960	1.0	20.00	0	110	75	125	21.25	3.29	20	
1,1-Dichloroethane	15.770	0.50	20.00	0	78.8	69	133	15.29	3.09	20	
1,1-Dichloroethene	14.860	1.0	20.00	0	74.3	68	130	14.51	2.38	20	
1,1-Dichloropropene	19.910	1.0	20.00	0	99.6	73	132	19.35	2.85	20	
1,2,3-Trichlorobenzene	22.870	1.0	20.00	0	114	67	137	22.84	0.131	20	
1,2,3-Trichloropropane	22.630	1.0	20.00	0	113	73	124	21.88	3.37	20	
1,2,4-Trichlorobenzene	19.420	1.0	20.00	0	97.1	66	134	19.13	1.50	20	
1,2,4-Trimethylbenzene	22.420	1.0	20.00	0	112	74	132	22.08	1.53	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values



ASSET LABORATORIES
 A DIVISION OF ENVIRONMENTAL SCIENTISTS, INC.
 CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436
 NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID	P160615LCSD	LCSD	SamptType:	8260_WP_SF	Units:	ug/L	Prep Date:	108981	RunNo:		
Client ID:	LCSS02	P16VW120	Batch ID:	EPA	8260B		6/15/2016	2352906	SeqNo:		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	22.690	2.0	20.00	0	113	50	132	21.34	6.13	20	
1,2-Dibromoethane	22.360	1.0	20.00	0	112	80	121	21.53	3.78	20	
1,2-Dichlorobenzene	21.550	1.0	20.00	0	108	71	122	20.66	4.22	20	
1,2-Dichloroethane	20.250	0.50	20.00	0	101	69	132	19.96	1.44	20	
1,2-Dichloropropane	19.990	1.0	20.00	0	100	75	125	19.97	0.100	20	
1,3,5-Trimethylbenzene	22.600	1.0	20.00	0	113	74	131	21.79	3.65	20	
1,3-Dichlorobenzene	21.940	1.0	20.00	0	110	75	124	21.51	1.98	20	
1,3-Dichloropropane	22.620	1.0	20.00	0	113	73	126	21.46	5.26	20	
1,4-Dichlorobenzene	21.230	1.0	20.00	0	106	74	123	20.47	3.65	20	
2,2-Dichloropropane	18.380	1.0	20.00	0	91.9	69	137	18.03	1.92	20	
2-Butanone	198.680	10	200.0	0	99.3	49	136	194.8	1.98	20	
2-Chlorotoluene	21.330	1.0	20.00	0	107	73	126	20.95	1.80	20	
4-Chlorotoluene	22.320	1.0	20.00	0	112	74	128	21.97	1.58	20	
4-Isopropyltoluene	22.200	1.0	20.00	0	111	73	130	21.40	3.67	20	
4-Methyl-2-pentanone	238.560	10	200.0	0	119	58	134	232.9	2.40	20	
Acetone	157.630	10	200.0	0	78.8	40	135	151.3	4.12	20	
Benzene	18.660	1.0	20.00	0	93.3	81	122	18.12	2.94	20	
Bromobenzene	21.070	1.0	20.00	0	105	76	124	20.51	2.69	20	
Bromochloromethane	18.520	1.0	20.00	0	92.6	65	129	17.93	3.24	20	
Bromodichloromethane	19.590	1.0	20.00	0	98.0	76	121	19.28	1.60	20	
Bromoform	21.830	1.0	20.00	0	109	69	128	21.72	0.505	20	
Bromomethane	15.790	1.0	20.00	0	79.0	53	141	15.81	0.127	20	
Carbon disulfide	15.370	1.0	20.00	0	76.8	75	125	15.29	0.522	20	
Carbon tetrachloride	19.250	0.50	20.00	0	96.2	66	138	18.58	3.54	20	
Chlorobenzene	20.710	1.0	20.00	0	104	81	122	20.39	1.56	20	
Chloroethane	17.820	1.0	20.00	0	89.1	58	133	18.17	1.94	20	
Chloroform	18.350	1.0	20.00	0	91.8	69	128	18.04	1.70	20	
Chloromethane	15.380	1.0	20.00	0	76.9	56	131	15.91	3.39	20	
cis-1,2-Dichloroethene	17.260	1.0	20.00	0	86.3	72	126	16.87	2.29	20	
cis-1,3-Dichloropropene	22.220	1.0	20.00	0	111	69	131	21.99	1.04	20	

Qualifiers:
 B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits
 Calculations are based on raw values



ASSET LABORATORIES
 ANALYTICAL SERVICES FOR THE ENERGY & PETROLEUM INDUSTRIES

CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID	P160615LCS02	SampType:	LCS02	Batch ID:	P16VW120	TestCode:	8260_WP_SF	Units:	ug/L	Prep Date:	RunNo:	108981
Client ID:	LCS02	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte												
Di-isopropyl ether	16.900	1.0	0	20.00	0	84.5	70	130	15.78	6.85	20	20
Dibromochloromethane	21.360	1.0	0	20.00	0	107	66	133	20.91	2.13	20	20
Dibromomethane	19.740	1.0	0	20.00	0	98.7	76	125	19.16	2.98	20	20
Dichlorodifluoromethane	13.790	1.0	0	20.00	0	69.0	53	153	14.45	4.67	20	20
Ethyl tert-butyl ether	18.900	1.0	0	20.00	0	94.5	70	130	15.60	19.1	20	20
Ethylbenzene	20.950	1.0	0	20.00	0	105	73	127	20.20	3.65	20	20
Freon-113	15.410	1.0	0	20.00	0	77.0	75	125	15.75	2.18	20	20
Hexachlorobutadiene	20.190	1.0	0	20.00	0	101	67	131	19.70	2.46	20	20
Isopropylbenzene	21.680	1.0	0	20.00	0	108	75	127	20.75	4.38	20	20
m,p-Xylene	44.380	1.0	0	40.00	0	111	76	128	43.26	2.56	20	20
Methylene chloride	16.370	2.0	0	20.00	0	81.8	63	137	16.63	1.58	20	20
MTBE	17.770	1.0	0	20.00	0	88.8	65	123	17.01	4.37	20	20
n-Butylbenzene	20.890	1.0	0	20.00	0	104	69	137	20.06	4.05	20	20
n-Propylbenzene	21.820	1.0	0	20.00	0	109	72	129	21.01	3.78	20	20
Naphthalene	19.150	1.0	0	20.00	0	95.8	54	138	18.76	2.06	20	20
o-Xylene	22.130	1.0	0	20.00	0	111	80	121	21.55	2.66	20	20
sec-Butylbenzene	22.240	1.0	0	20.00	0	111	72	127	21.50	3.38	20	20
Styrene	25.370	1.0	0	20.00	0	127	65	134	24.44	3.73	20	20
Tert-amyl methyl ether	19.670	1.0	0	20.00	0	98.4	70	130	18.83	4.36	20	20
Tert-Butanol	105.010	5.0	0	100.0	0	105	70	130	93.53	11.6	20	20
tert-Butylbenzene	22.810	1.0	0	20.00	0	114	70	129	22.16	2.89	20	20
Tetrachloroethene	20.440	1.0	0	20.00	0	102	66	128	19.82	3.08	20	20
Toluene	20.050	2.0	0	20.00	0	100	77	122	19.75	1.51	20	20
trans-1,2-Dichloroethene	16.270	1.0	0	20.00	0	81.4	63	137	15.90	2.30	20	20
trans-1,3-Dichloropropene	22.510	1.0	0	20.00	0	113	59	135	22.29	0.982	20	20
Trichloroethene	19.860	1.0	0	20.00	0	99.3	70	127	18.97	4.58	20	20
Trichlorofluoromethane	17.460	1.0	0	20.00	0	87.3	57	129	17.78	1.82	20	20
Vinyl chloride	16.240	0.50	0	20.00	0	81.2	50	134	16.10	0.866	20	20
Xylenes, Total	66.510	2.0	0	60.00	0	111	75	125	64.81	2.59	20	20
Surr: 1,2-Dichloroethane-d4	25.720			25.00		103	72	119		0		

Qualifiers:
 B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits
 Calculations are based on raw values



ASSET LABORATORIES
 A SERVICE TO THE ENVIRONMENT THROUGH TECHNOLOGY
 CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436
 NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160615LCS02	Sample Type: LCS02	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108981						
Client ID: LCSS02	Batch ID: P16VW120	TestNo: EPA 8260B		Analysis Date: 6/15/2016	SeqNo: 2352906						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	26.190		25.00		105	76	119		0		
Surr: Dibromofluoromethane	25.350		25.00		101	85	115		0		
Surr: Toluene-d8	25.960		25.00		104	81	120		0		

Sample ID: P160615MB3	Sample Type: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108981						
Client ID: PBW	Batch ID: P16VW120	TestNo: EPA 8260B		Analysis Date: 6/15/2016	SeqNo: 2352909						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	ND	1.0									
1,1,1-Trichloroethane	ND	1.0									
1,1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	1.0									
1,1-Dichloropropene	ND	1.0									
1,2,3-Trichlorobenzene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2,4-Trichlorobenzene	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,2-Dibromo-3-chloropropane	ND	2.0									
1,2-Dibromoethane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2,2-Dichloropropane	ND	1.0									
2-Butanone	ND	10									

Qualifiers:
B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
E Value above quantitation range
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
 Calculations are based on raw values

CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site


TestCode: 8260_WP_SFPP

Sample ID: P160615MB3	SampleType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 108981
Client ID: PBW	Batch ID: P16VW120	TestNo: EPA 8260B		Analysis Date: 6/15/2016	SeqNo: 2352909

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	ND	1.0									
4-Chlorotoluene	ND	1.0									
4-Isopropyltoluene	ND	1.0									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	1.0									
Bromobenzene	ND	1.0									
Bromochloromethane	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.060	1.0									J
Chloromethane	ND	1.0									
cis-1,2-Dichloroethene	ND	1.0									
cis-1,3-Dichloropropene	ND	1.0									
Di-isopropyl ether	ND	1.0									
Dibromochloromethane	ND	1.0									
Dibromomethane	ND	1.0									
Dichlorodifluoromethane	ND	1.0									
Ethyl tert-butyl ether	ND	1.0									
Ethylbenzene	ND	1.0									
Freon-113	ND	1.0									
Hexachlorobutadiene	ND	1.0									
Isopropylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	2.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values



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CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: P160615MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L
Client ID: PBW	Batch ID: P16VW120	TestNo: EPA 8260B	Prep Date:
		Analysis Date: 6/15/2016	RunNo: 108981
			SeqNo: 2352909

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	ND	1.0									
n-Butylbenzene	ND	1.0									
n-Propylbenzene	ND	1.0									
Naphthalene	ND	1.0									
o-Xylene	ND	1.0									
sec-Butylbenzene	ND	1.0									
Styrene	ND	1.0									
Tert-amyl methyl ether	ND	1.0									
Tert-Butanol	ND	5.0									
tert-Butylbenzene	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	2.0									
trans-1,2-Dichloroethene	ND	1.0									
trans-1,3-Dichloropropene	ND	1.0									
Trichloroethene	ND	1.0									
Trichlorofluoromethane	ND	1.0									
Vinyl chloride	ND	0.50									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	26.580		25.00		106	72	119				
Surr: 4-Bromofluorobenzene	24.040		25.00		96.2	76	119				
Surr: Dibromofluoromethane	27.430		25.00		110	85	115				
Surr: Toluene-d8	25.290		25.00		101	81	120				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.730	1.0	20.00	0	109	81	129				
1,1,1-Trichloroethane	17.880	1.0	20.00	0	89.4	67	132				
1,1,1,2,2-Tetrachloroethane	21.850	1.0	20.00	0	109	63	128				

Sample ID: N020073-001BMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L
Client ID: ZZZZZZ	Batch ID: P16VW120	TestNo: EPA 8260B	Prep Date:
		Analysis Date: 6/15/2016	RunNo: 108981
			SeqNo: 2352926

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference	DO Surrogate Diluted Out	Calculations are based on raw values

ASSET LABORATORIES
ANALYTICAL SERVICES FOR THE ENVIRONMENT & TECHNOLOGY

CALIFORNIA
11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436

NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: N020073-001BMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L
Client ID: ZZZZZZ	Batch ID: P16VW120	TestNo: EPA 8260B	Prep Date:
		Analysis Date: 6/15/2016	RunNo: 108981
			SeqNo: 2352926

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	21.850	1.0	20.00	0	109	75	125				
1,1-Dichloroethane	16.970	0.50	20.00	0	84.8	69	133				
1,1-Dichloroethene	14.820	1.0	20.00	0	74.1	68	130				
1,1-Dichloropropene	17.970	1.0	20.00	0	89.8	73	132				
1,2,3-Trichlorobenzene	22.230	1.0	20.00	0	111	67	137				
1,2,3-Trichloropropane	21.930	1.0	20.00	0	110	73	124				
1,2,4-Trichlorobenzene	19.260	1.0	20.00	0	96.3	66	134				
1,2,4-Trimethylbenzene	22.310	1.0	20.00	0	112	74	132				
1,2-Dibromo-3-chloropropane	21.250	2.0	20.00	0	106	50	132				
1,2-Dibromoethane	21.200	1.0	20.00	0	106	80	121				
1,2-Dichlorobenzene	20.550	1.0	20.00	0	103	71	122				
1,2-Dichloroethane	19.460	0.50	20.00	0	97.3	69	132				
1,2-Dichloropropane	19.640	1.0	20.00	0	98.2	75	125				
1,3,5-Trimethylbenzene	22.180	1.0	20.00	0	111	74	131				
1,3-Dichlorobenzene	21.090	1.0	20.00	0	105	75	124				
1,3-Dichloropropane	21.600	1.0	20.00	0	108	73	126				
1,4-Dichlorobenzene	20.440	1.0	20.00	0	102	74	123				
2,2-Dichloropropane	17.210	1.0	20.00	0	86.1	69	137				
2-Butanone	153.170	10	200.0	1,090	76.0	49	136				
2-Chlorotoluene	20.830	1.0	20.00	0	104	73	126				
4-Chlorotoluene	21.500	1.0	20.00	0	108	74	128				
4-Isopropyltoluene	21.640	1.0	20.00	0	108	73	130				
4-Methyl-2-pentanone	237.510	10	200.0	0	119	58	134				
Acetone	95.480	1.0	200.0	7,410	44.0	40	135				
Benzene	17.330	1.0	20.00	0	86.7	81	122				
Bromobenzene	20.200	1.0	20.00	0	101	76	124				
Bromochloromethane	17.550	1.0	20.00	0	87.8	65	129				
Bromodichloromethane	18.550	1.0	20.00	0	92.8	76	121				
Bromoform	20.840	1.0	20.00	0	104	69	128				
Bromomethane	15.790	1.0	20.00	0	79.0	53	141				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
Calculations are based on raw values



CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436
 NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: N020073-001BMS **Batch ID:** P16VW120 **TestCode:** 8260_WP_SF **Units:** ug/L **Prep Date:** **RunNo:** 108981
Client ID: ZZZZZZ **Batch ID:** EPA 8260B **TestNo:** EPA 8260B **Analysis Date:** 6/15/2016 **SeqNo:** 2352926

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	15.670	1.0	20.00	0.04000	78.2	75	125				
Carbon tetrachloride	17.240	0.50	20.00	0	86.2	66	138				
Chlorobenzene	20.000	1.0	20.00	0	100	81	122				
Chloroethane	17.680	1.0	20.00	0	88.4	58	133				
Chloroform	17.560	1.0	20.00	0	87.8	69	128				
Chloromethane	16.080	1.0	20.00	0	80.4	56	131				
cis-1,2-Dichloroethene	15.970	1.0	20.00	0	79.8	72	126				
cis-1,3-Dichloropropene	21.820	1.0	20.00	0	109	69	131				
Di-isopropyl ether	17.080	1.0	20.00	0	85.4	70	130				
Dibromochloromethane	20.700	1.0	20.00	0	104	66	133				
Dibromomethane	19.220	1.0	20.00	0	96.1	76	125				
Dichlorodifluoromethane	14.200	1.0	20.00	0	71.0	53	153				
Ethyl tert-butyl ether	16.760	1.0	20.00	0	83.8	70	130				
Ethylbenzene	20.440	1.0	20.00	0	102	73	127				
Freon-113	15.370	1.0	20.00	0	76.8	75	125				
Hexachlorobutadiene	19.190	1.0	20.00	0	96.0	67	131				
Isopropylbenzene	20.840	1.0	20.00	0	104	75	127				
m,p-Xylene	43.580	1.0	40.00	0	109	76	128				
Methylene chloride	16.690	2.0	20.00	0	83.4	63	137				
MTBE	18.310	1.0	20.00	0	91.6	65	123				
n-Butylbenzene	20.590	1.0	20.00	0.04000	103	69	137				
n-Propylbenzene	21.370	1.0	20.00	0	107	72	129				
Naphthalene	20.180	1.0	20.00	0	101	54	138				
o-Xylene	21.770	1.0	20.00	0	109	80	121				
sec-Butylbenzene	21.950	1.0	20.00	0	110	72	127				
Styrene	15.930	1.0	20.00	0	79.6	65	134				
Tert-amyl methyl ether	18.710	1.0	20.00	0	93.6	70	130				
Tert-Butanol	109.880	5.0	100.0	0	110	70	130				
tert-Butylbenzene	22.280	1.0	20.00	0	111	70	129				
Tetrachloroethene	19.470	1.0	20.00	0	97.4	66	128				

Qualifiers:
 B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits
 Calculations are based on raw values



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 CALIFORNIA NEVADA
 11060 Artesia Blvd., Ste C, Carrritos, CA 90703 3151 W. Post Rd., Las Vegas, NV 89118
 P: 562.219.7435 F: 562.219.7436 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID	N020073-001BMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	RunNo: 108981						
Client ID:	ZZZZZZ	Batch ID: P16VW120	TestNo: EPA 8260B	Analysis Date: 6/15/2016	SeqNo: 2352926						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	19.580	2.0	20.00	0	97.9	77	122				
trans-1,2-Dichloroethene	15.720	1.0	20.00	0	78.6	63	137				
trans-1,3-Dichloropropene	21.510	1.0	20.00	0	108	59	135				
Trichloroethene	18.970	1.0	20.00	0	94.8	70	127				
Trichlorofluoromethane	17.230	1.0	20.00	0	86.2	57	129				
Vinyl chloride	16.940	0.50	20.00	0	84.7	50	134				
Xylenes, Total	65.350	2.0	60.00	0	109	75	125				
Surr: 1,2-Dichloroethane-d4	25.940		25.00		104	72	119				
Surr: 4-Bromofluorobenzene	25.990		25.00		104	76	119				
Surr: Dibromofluoromethane	24.710		25.00		98.8	85	115				
Surr: Toluene-d8	25.340		25.00		101	81	120				

Sample ID	N020073-001BMSD	SampType: MSD	TestCode: 8260_WP_SF	Units: ug/L	RunNo: 108981						
Client ID:	ZZZZZZ	Batch ID: P16VW120	TestNo: EPA 8260B	Analysis Date: 6/15/2016	SeqNo: 2352927						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.780	1.0	20.00	0	109	81	129	21.73	0.230	20	
1,1,1-Trichloroethane	18.130	1.0	20.00	0	90.7	67	132	17.88	1.39	20	
1,1,2,2-Tetrachloroethane	22.390	1.0	20.00	0	112	63	128	21.85	2.44	20	
1,1,2-Trichloroethane	22.090	1.0	20.00	0	110	75	125	21.85	1.09	20	
1,1-Dichloroethane	15.620	0.50	20.00	0	78.1	69	133	16.97	8.28	20	
1,1-Dichloroethene	15.410	1.0	20.00	0	77.0	68	130	14.82	3.90	20	
1,1-Dichloropropene	18.750	1.0	20.00	0	93.8	73	132	17.97	4.25	20	
1,2,3-Trichlorobenzene	23.390	1.0	20.00	0	117	67	137	22.23	5.09	20	
1,2,3-Trichloropropene	23.150	1.0	20.00	0	116	73	124	21.93	5.41	20	
1,2,4-Trichlorobenzene	19.720	1.0	20.00	0	98.6	66	134	19.26	2.36	20	
1,2,4-Trimethylbenzene	23.020	1.0	20.00	0	115	74	132	22.31	3.13	20	
1,2-Dibromo-3-chloropropane	23.140	2.0	20.00	0	116	50	132	21.25	8.52	20	
1,2-Dibromoethane	22.160	1.0	20.00	0	111	80	121	21.20	4.43	20	
1,2-Dichlorobenzene	22.010	1.0	20.00	0	110	71	122	20.55	6.86	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID	N020073-001BMSD	MSD	SampType	8260_WP_SF		Units	ug/L	Prep Date:	RunNo: 108981		
				TestCode: 8260_WP_SF	Batch ID: P16VW120						
Client ID:	ZZZZZZ			EPA 8260B					SeqNo: 2352927		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane	19.970	0.50	20.00	0	99.8	69	132	19.46	2.59	20	
1,2-Dichloropropane	20.260	1.0	20.00	0	101	75	125	19.64	3.11	20	
1,3,5-Trimethylbenzene	22.820	1.0	20.00	0	114	74	131	22.18	2.84	20	
1,3-Dichlorobenzene	22.120	1.0	20.00	0	111	75	124	21.09	4.77	20	
1,3-Dichloropropane	22.240	1.0	20.00	0	111	73	126	21.60	2.92	20	
1,4-Dichlorobenzene	21.660	1.0	20.00	0	108	74	123	20.44	5.80	20	
2,2-Dichloropropane	16.770	1.0	20.00	0	83.9	69	137	17.21	2.59	20	
2-Butanone	158.220	10	200.0	1.090	78.6	49	136	153.2	3.24	20	
2-Chlorotoluene	21.430	1.0	20.00	0	107	73	126	20.83	2.84	20	
4-Chlorotoluene	22.590	1.0	20.00	0	113	74	128	21.50	4.94	20	
4-Isopropyltoluene	22.560	1.0	20.00	0	113	73	130	21.64	4.16	20	
4-Methyl-2-pentanone	248.820	10	200.0	0	124	58	134	237.5	4.65	20	
Acetone	98.670	10	200.0	7.410	45.6	40	135	95.48	3.29	20	
Benzene	17.250	1.0	20.00	0	86.2	81	122	17.33	0.463	20	
Bromobenzene	20.990	1.0	20.00	0	105	76	124	20.20	3.84	20	
Bromochloromethane	18.200	1.0	20.00	0	91.0	65	129	17.55	3.64	20	
Bromodichloromethane	19.890	1.0	20.00	0	99.4	76	121	18.55	6.97	20	
Bromoforn	21.510	1.0	20.00	0	108	69	128	20.84	3.16	20	
Bromomethane	16.610	1.0	20.00	0	83.0	53	141	15.79	5.06	20	
Carbon disulfide	16.260	1.0	20.00	0.04000	81.1	75	125	15.67	3.70	20	
Carbon tetrachloride	17.830	0.50	20.00	0	89.2	66	138	17.24	3.36	20	
Chlorobenzene	20.400	1.0	20.00	0	102	81	122	20.00	1.98	20	
Chloroethane	18.700	1.0	20.00	0	93.5	58	133	17.68	5.61	20	
Chloroform	17.630	1.0	20.00	0	88.2	69	128	17.56	0.398	20	
Chloromethane	16.710	1.0	20.00	0	83.6	56	131	16.08	3.84	20	
cis-1,2-Dichloroethene	16.130	1.0	20.00	0	80.6	72	126	15.97	0.997	20	
cis-1,3-Dichloropropene	22.620	1.0	20.00	0	113	69	131	21.82	3.60	20	
Di-isopropyl ether	16.860	1.0	20.00	0	84.3	70	130	17.08	1.30	20	
Dibromochloromethane	20.710	1.0	20.00	0	104	66	133	20.70	0.0483	20	
Dibromomethane	19.780	1.0	20.00	0	98.9	76	125	19.22	2.87	20	

Qualifiers:
 B Analyte detected in the associated Method B blank
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits
 Calculations are based on raw values



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CALIFORNIA
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 P: 562.219.7435 F: 562.219.7436

NEVADA
 3151 W. Post Rd., Las Vegas, NV 89118
 P: 702.307.2659 F: 702.307.2691

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2MHill
Work Order: N020072
Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	RunNo: 108981	
												TestCode: 8260_WP_SF	Units: ug/L
Sample ID N020073-001BMSD		SampType: MSD		Batch ID: P16VW120		Prep Date:		Analysis Date: 6/15/2016		SeqNo: 2352927			
Dichlorodifluoromethane	14.540	1.0	20.00	0	72.7	53	153	14.20	2.37	20			
Ethyl tert-butyl ether	16.260	1.0	20.00	0	81.3	70	130	16.76	3.03	20			
Ethylbenzene	20.570	1.0	20.00	0	103	73	127	20.44	0.634	20			
Freon-113	15.910	1.0	20.00	0	79.6	75	125	15.37	3.45	20			
Hexachlorobutadiene	19.560	1.0	20.00	0	97.8	67	131	19.19	1.91	20			
Isopropylbenzene	21.580	1.0	20.00	0	108	75	127	20.84	3.49	20			
m,p-Xylene	43.800	1.0	40.00	0	110	76	128	43.58	0.504	20			
Methylene chloride	16.470	2.0	20.00	0	82.4	63	137	16.69	1.33	20			
MTBE	17.550	1.0	20.00	0	87.8	65	123	18.31	4.24	20			
n-Butylbenzene	20.800	1.0	20.00	0.04000	104	69	137	20.59	1.01	20			
n-Propylbenzene	22.060	1.0	20.00	0	110	72	129	21.37	3.18	20			
Naphthalene	20.540	1.0	20.00	0	103	54	138	20.18	1.77	20			
o-Xylene	22.280	1.0	20.00	0	111	80	121	21.77	2.32	20			
sec-Butylbenzene	22.550	1.0	20.00	0	113	72	127	21.95	2.70	20			
Styrene	15.730	1.0	20.00	0	78.7	65	134	15.93	1.26	20			
Tert-amyl methyl ether	19.400	1.0	20.00	0	97.0	70	130	18.71	3.62	20			
Tert-Butanol	117.080	5.0	100.0	0	117	70	130	109.9	6.34	20			
tert-Butylbenzene	22.910	1.0	20.00	0	115	70	129	22.28	2.79	20			
Tetrachloroethene	19.830	1.0	20.00	0	99.2	66	128	19.47	1.83	20			
Toluene	20.000	2.0	20.00	0	100	77	122	19.58	2.12	20			
trans-1,2-Dichloroethene	15.620	1.0	20.00	0	78.1	63	137	15.72	0.638	20			
trans-1,3-Dichloropropene	22.230	1.0	20.00	0	111	59	135	21.51	3.29	20			
Trichloroethene	19.470	1.0	20.00	0	97.4	70	127	18.97	2.60	20			
Trichlorofluoromethane	17.610	1.0	20.00	0	88.0	57	129	17.23	2.18	20			
Vinyl chloride	16.960	0.50	20.00	0	84.8	50	134	16.94	0.118	20			
Xylenes, Total	66.080	2.0	60.00	0	110	75	125	65.35	1.11	20			
Surr: 1,2-Dichloroethane-d4	26.370		25.00		105	72	119		0				
Surr: 4-Bromofluorobenzene	26.020		25.00		104	76	119		0				
Surr: Dibromofluoromethane	24.820		25.00		99.3	85	115		0				
Surr: Toluene-d8	25.850		25.00		103	81	120		0				

Qualifiers:

B	Analyte detected in the associated Method B blank	E	Value above quantitation range
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
Calculations are based on raw values



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11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436

NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

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CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
 3151 W. Post Road
 Las Vegas, NV 89118
 Tel: 702-307-2659 Fax: 702-307-2691
 Marlon Cartin (marlon@atl-labs.com)

DATE: 6/14/16
 PAGE: 1 OF 1

LABORATORY CLIENT: Kinder Morgan Energy Partners, Attn: Steve Defibaugh 1100 Town & Country Road Orange, CA 92868 TEL: <u>714-560-4802</u> FAX: <u>714-560-4601</u> E-MAIL: <u>steve.defibaugh@kemp.com</u>	CLIENT PROJECT NAME/NUMBER: SFPP - Norwalk Site PROJECT CONTACT: James Dye SAMPLER(S): (SIGNATURE)
P.O. NO.: QUOTE NO.: LAB USE ONLY: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	DATE	TIME	MAT. RIX	NO. OF CONT.	COMMENTS
	INF-06-14	Influent	6/14/16	13:10	WW	8	TPH - g, TPH-d, and TPH-oil (8015M) X Full VOC+ Oxygenates List (8260B) X 1.6°C JRA # 2

Reinquished by: (Signature)	Received by: (Signature) <u>Yoantra Pedriquez</u>
Reinquished by: (Signature)	Received by: (Signature) <u>Yoantra Pedriquez</u>
Reinquished by: (Signature)	Received by: (Signature) <u>Yoantra Pedriquez</u>
Date: <u>6-14-16</u> Time: <u>13:42</u>	Date: <u>6/15/16</u> Time: <u>8:20 am</u>

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 6/14/2016 Workorder: N020072
 Rep sample Temp (Deg C): 1.6 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: Golden State Overnight
 Last 4 digits of Tracking No.: 3971 Packing Material Used: Bubble Wrap
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed By: YR YR 6/16/2016

Reviewed By: TK 6/20/2016

ASSET Laboratories

WORK ORDER Summary

15-Jun-16

WorkOrder: N020072

Client ID: CH2HI03

Project: SFPP - Norwalk Site

QC Level: RTNE

Date Received: 6/14/2016

Comments: Report to D. Jablonski/CH2M HILL, cc:KMEP

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N020072-001A	INF-06-14	6/14/2016 1:10:00 PM	6/21/2016	Wastewater	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
			6/21/2016		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
N020072-001B			6/21/2016		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			6/21/2016		EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			6/21/2016		EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N020072-002A	FOLDER		6/21/2016		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB



800-322-5555 www.gso.com

Ship From

ASSET LABORATORIES
MOLKY BRAR
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Tracking #: 532263971

CPS



Ship To

ATL INC
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

LVS
LAS VEGAS

A

COD: \$0.00

Weight: 0 lb(s)

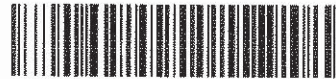
Reference:

C89102A

Delivery Instructions:

HOLD FOR PICK UP

Signature Type: REQUIRED



53019678

Print Date: 6/14/2016 5:04 PM

Package 1 of 2

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

1.6°C
FR # 2