

REPORT

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

Prepared for

Kinder Morgan Energy Partners, L.P.

January 13, 2017



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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.



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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.
DAF	dissolved air flotation
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, at 15306 Norwalk Boulevard, Norwalk, California (the site; Figure 1) during the fourth 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 October through December 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 from October through December 2016 and the progress achieved through those activities are summarized in the following sections.

Remediation Systems

SFPF operates remediation systems consisting of soil vapor extraction (SVE), total fluids extraction (TFE; extraction of free product and/or groundwater using a top-loading pump), GWE (extraction of groundwater using a bottom-loading pump), and treatment of extracted soil vapors and groundwater to address the south-central and southeastern areas of the site. Biosparging is also employed in the south-central area to enhance natural attenuation of hydrocarbon constituents.

Operation of the West Side Barrier (WSB) GWE system (WSB system) for remediation of the western offsite area was discontinued in August 2008 based on the reduced lateral extent and low concentrations of volatile organic compounds (VOCs) west of the site.

The objectives of the remediation systems are to contain and control the migration of hydrocarbon constituents in groundwater and soil vapor and to remove hydrocarbon mass from soil and groundwater. The remediation system includes the following wells:

- South-Central Area
 - 20 TFE wells
 - 24 onsite and 6 offsite SVE wells (most collocated with TFE wells)
 - 2 horizontal SVE wells
 - 1 horizontal biosparge well
- Southeastern Area (24-inch Block Valve Area)
 - 4 TFE wells (GMW-O-15, GMW-O-18, GMW-36, and GMW-SF-9)
 - 3 SVE wells (collocated with TFE wells)
 - 1 GWE well (GMW-SF-10)

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 fourth quarter 2016. The remediation system layout is shown on Figure 2. A brief description of each system is provided below.

2.1 SVE System

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 regenerative thermal oxidizer (RTO) where 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).

2.2 Groundwater Treatment System

The main GWTS handles 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 fluid pumps and bottom-loading groundwater pumps are piped to an oil-water separator (OWS). Free product, if any, 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

(FBBRs) installed downstream of the equalization tank treat fuel oxygenates such as tertiary butyl alcohol (TBA) and methyl tertiary butyl ether (MTBE). The treated groundwater then passes through polishing LGAC units prior to discharge to a storm drain that leads to Coyote Creek. Discharge to Coyote Creek is performed in accordance with a National Pollutant Discharge Elimination System permit (No. CA0063509; Order R4-2016-0309).

2.3 Horizontal Biosparge System

SFPP recently completed installation of a horizontal biosparge system in the south-central area of the site. The biosparge well is constructed of 4-inch-diameter Schedule 80 polyvinyl chloride (PVC) casing and screen completed to a vertical depth of approximately 45 feet below ground surface. The lateral distance of the screen interval is 600 feet, which is centered below the central portion of the south-central area hydrocarbon plume. Further details regarding the construction of the biosparge well is documented in the report titled, *Horizontal Biosparge Well and Soil Vapor Monitoring Probe Completion Report, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California* (CH2M, February 8, 2015).

The compressor used to deliver ambient air to the biosparge well has 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 offgassing of VOCs during biosparge operations. Pilot testing of the biosparge system commenced in early January 2016 and continued through October 2016. Soil vapor data collected as part of the pilot testing have been submitted to the RWQCB and Restoration Advisory Board (RAB) under separate cover. Preparation of a comprehensive evaluation report that incorporates soil vapor and groundwater data is currently in process.

Operations and Maintenance

During the fourth 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 the horizontal biosparge system until shutdown of the systems on November 1, 2016.
- Performed ongoing weekly maintenance on the GWTS.

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

- The GWTS, SVE, and biosparging systems were turned off on September 27, 2016, to facilitate gauging and sampling activities for the second semiannual groundwater monitoring event. The SVE and biosparge systems were restarted on October 7, 2016. The GWTS was restarted on October 11, 2016.
- The SVE and biosparging systems were turned off on November 1, 2016, to facilitate the removal of the existing thermal oxidizer and for installation of a new RTO.
- The GWTS was turned off on November 10, 2016, to facilitate the removal of components associated with the old OWS. The system was restarted on December 8, 2016.
- The GWTS was turned off on December 22, 2016, for a carbon changeout of the lead GAC vessel and the two polish vessels. The GWTS was restarted on December 23, 2016.

During this reporting period, and when operating, SVE and biosparge 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 fourth quarter 2016, the SVE and biosparging systems were operational 27 percent of the time (95 percent of the time excluding planned shutdowns), and the GWTS operated 57 percent of the time (100 percent of the time excluding planned shutdowns). The low uptime for the SVE and GWTS was primarily due to the planned installation of the new RTO system. Table 2 presents the SVE system operations summary. Extracted vapor photoionization detector (PID) measurements collected during the fourth quarter 2016 are summarized in Table 3. Extracted vapor analytical results for the fourth quarter 2016 are summarized in Table 4. The groundwater remediation system operation activities for the fourth quarter 2016 are summarized in Table 5. The extracted groundwater analytical results for the fourth 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 fourth quarter 2016 when the systems were in operation. During the fourth quarter 2016, influent vapor samples were collected on October 13 and November 1, 2016. Influent water samples were collected on October 21, November 8, and December 27, 2016. The water samples were delivered to Asset Laboratories (Asset) 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 4,225 pounds during the fourth quarter 2016. A significant increase in mass removal was observed during the first and second quarters of 2016 due to higher influent concentrations resulting from operation of the horizontal biosparge system. During the third and fourth quarters of 2016, influent concentrations declined to less than 1,000 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 3,476,655 pounds (Table 2). The cumulative mass removed by SVE does not include the mass removed by naturally occurring in situ biodegradation.

A total of 586,485 gallons of groundwater was extracted during the fourth quarter 2016 (Table 5). No water was extracted from the WSB area during the fourth quarter 2016. Approximately 99.6 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 fourth quarter 2016 did not warrant restarting the WSB system.

No free product accumulated in the product holding tank during the fourth quarter 2016. A total of 4 gallons of product was bailed from southeastern well GMW-O-18 on December 13, 2016. Since 1995, a total of 14,101 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 19,407 pounds. During the fourth quarter 2016, the mass removal of hydrocarbons was estimated to be 44 pounds. Table 6 shows the extracted groundwater analytical results for the samples collected on October 21, November 8, and December 27, 2016. TPH, BTEX, and MTBE concentrations declined significantly in the fourth quarter 2016, relative to concentrations reported in late 2015 and early 2016. This reduction in dissolved-phase hydrocarbon concentrations can be attributed to continued biosparge operations in the south-central area.

The biosparge system operated for 527 hours in the fourth quarter 2016 (Table 7). The biosparge system flow (air injection) rate ranged from 110 scfm (upon startup events) to a maximum of 598 scfm during the fourth quarter 2016.

System Evaluation and Optimization

During the fourth quarter 2016, all offsite SVE well valves have been fully open to ensure maximum vapor extraction from the offsite area; onsite SVE well valves were 50 percent open to optimize SVE system operation and compliance. Since August 2016, SVE influent concentrations have declined to less than 1,000 ppmv; therefore, in the first quarter 2017, operation of the SVE system will include more onsite wells in the fully open position to increase influent concentrations and optimize SVE system performance.

The GWTS was offline in early October 2016 to facilitate semiannual groundwater monitoring activities, and offline for most of November 2016 to facilitate demolition of the old OWS and installation of a new RTO, as previously discussed. The system was restarted on December 8, 2016, and continued to operate during the fourth quarter 2016 for hydraulic control and product recovery in the south-central and southeastern areas. TFE pump inlet depths will be adjusted, as needed, to optimize GWE and product recovery in the first quarter 2017.

The second semiannual 2016 groundwater monitoring event in the WSB region occurred during the fourth 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 eight remediation wells during the second semiannual groundwater monitoring event (conducted during the fourth quarter of 2016). Of these, three wells (GMW-36, GMW-O-15, and GMW-O-18) in the southeastern area had measureable product; the remaining five wells (GMW-10, GMW-O-11, GMW-O-12, GWR-3, and MW-O-2) with measurable product are located in the south-central area. In the southeastern area, a maximum product thickness of 4.94 feet was reported in offsite well GMW-O-18, which is a historical high for this well. It is believed that the increased product thickness is indicative of declining water levels across the site (Figure 3). In addition, GMW-O-18 was offline for several weeks during the fourth quarter in order to facilitate removal of a stuck pump. Measurable product was significantly reduced after hand bailing 4 gallons on December 13, 2016. TFE will resume in GMW-O-18 and the other southeastern area extraction wells will remain online in the first quarter 2017.

In the south-central area, the magnitude and extent of measurable product declined significantly relative to the fourth quarter 2015 (pre-biosparge conditions). Of the 21 wells with measurable product in October 2015, a 100 percent reduction of product was observed in 16 wells by October 2016. A maximum product thickness of 2.3 feet was reported in offsite well GMW-O-12 during October 2016, which is significantly less than thicknesses reported in October 2015 and April 2016 (11.3 and 6.5 feet, respectively). 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 first quarter 2017, upon installation of the new RTO. Air injection rates will be optimized to ensure adequate destruction efficiency of extracted vapors by the SVE system.

Planned First Quarter 2017 Activities

During the first quarter 2017, 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 first quarter 2017:

- Deliver new RTO vapor extraction and treatment system, and complete installation.
- Resume SVE and horizontal biosparge system operations once RTO installation is complete.
- Continue weekly maintenance and monitoring of the south-central and southeastern SVE and TFE/GWE treatment systems, and 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.

TFE in the south-central and southeastern areas will continue during the first quarter 2017. Operation of the TFE system will be monitored closely, and adjustments will be made to optimize free product and groundwater recovery. The SVE and horizontal biosparge systems will be brought online once the new RTO installation is complete. System inspections will continue on a weekly basis; system evaluation parameters will be collected as needed. The remediation activities and progress for the first quarter 2017 will be described in the first quarter 2017 Remediation Progress Report, to be submitted by April 15, 2017.

Pilot testing of the horizontal biosparge system in the south-central area is complete. Preparation of a comprehensive evaluation report, which includes soil vapor and groundwater data collected between January and October 2016, will be prepared and submitted to the RWQCB under separate cover. A recommendation for system expansion will be included in the report.

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.

California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 2014. Letter to Mr. Stephen Defibaugh, Kinder Morgan Energy Partners; Approval of Horizontal Biosparge Pilot Test Work Plan, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California. February 26.

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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 Fourth Quarter 2016	
						SVE/BS	TFE/GWE
South-Central	MW-SF-1	6/18/1990	78.93	25 - 40	SVE	OFF	--
	MW-SF-2	6/18/1990	78.53	25 - 40	SVE; TFE	OFF	OFF
	MW-SF-3	6/18/1990	78.12	25 - 40	SVE; TFE	OFF	ON
	MW-SF-4	6/19/1990	79.38	25 - 40	SVE	OFF	--
	MW-SF-5	9/19/1990	79.74	23 - 38	SVE	OFF	--
	MW-SF-6	9/19/1990	76.80	25 - 40	SVE; TFE	OFF	OFF
	MW-SF-9	6/15/1995	74.10	--	SVE	OFF	--
	MW-SF-10	9/23/2003	76.53	10 - 30	SVE	OFF	--
	MW-SF-11	6/19/2007	78.56	20 - 40	SVE; TFE	OFF	OFF
	MW-SF-12	6/18/2007	78.07	20 - 40	SVE; TFE	OFF	OFF
	MW-SF-13	6/19/2007	73.40	20 - 40	SVE; TFE	OFF	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	OFF	OFF
	MW-SF-16	6/20/2007	78.21	20 - 40	SVE; TFE	OFF	OFF
	MW-SF-17	--	--	--	SVE	OFF	--
	GMW-9	7/8/1991	77.16	20 - 50	SVE; TFE	OFF	ON
	GMW-10	7/8/1991	N/A	25 - 50	SVE; TFE	OFF	ON
	GMW-22	8/2/1991	77.24	25 - 60	SVE; TFE	OFF	OFF
	GMW-24	8/5/1991	77.48	25 - 60	SVE; TFE	OFF	OFF
	GMW-25	1/10/1992	78.14	20 - 50	SVE; TFE	OFF	OFF
	GWR-3	1/10/1992	77.60	20 - 50	SVE; TFE	OFF	OFF
	VEW-1	09/19/90	--	5 - 25	SVE	OFF	--
	VEW-2	09/19/90	--	5 - 25	SVE	OFF	--
	MW-O-1	1/22/1991	75.48	25 - 40	SVE; TFE	OFF	OFF
	MW-O-2	1/23/1991	71.90	25 - 40	SVE; TFE	OFF	OFF
	GMW-O-11	5/20/1992	74.17	20 - 50	SVE; TFE	OFF	OFF
	GMW-O-12	5/21/1992	73.49	20 - 50	SVE	OFF	--
	GMW-O-20	6/15/1995	73.32	--	SVE; TFE	OFF	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	OFF	OFF
	MW-18 (MID)	6/10/1991	75.67	50 - 60	SVE	OFF	--
HW-1	09/06/92	--	--	SVE	OFF	--	
HW-2	09/06/92	--	--	SVE	OFF	--	
BS-01	08/27/14	75.06	--	BIOSPARGE	OFF	--	
Southeastern	GMW-O-15	4/19/1994	74.23	20 - 50	SVE; TFE	OFF	ON
	GMW-O-18	7/25/1994	74.36	21 - 40	SVE; TFE	OFF	ON
	GMW-36	4/11/1994	76.66	20 - 50	SVE; TFE	OFF	ON
	GMW-SF-9	4/1/2003	73.05	37 - 46	TFE	--	ON
	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
Second Quarter 2016 Totals	101,900	3,492	--	--	--	47,416
Third Quarter 2016 Totals	103,808	1,908	--	--	--	30,403
10/7/2016	103,811	3	500	2,005	60	22
10/8/2016	103,833	22	595	1,911	63	207
10/11/2016	103,903	71	298	2,110	63	398
10/18/2016	104,067	164	448	1,848	75	1,215
10/25/2016	104,236	169	478	1,817	75	1,426
11/1/2016	104,405	169	318	1,807	75	958
Fourth Quarter 2016 Totals	104,405	597	--	--	--	4,225
2016 Totals	104,405	7,694	--	--	--	156,193
Cumulative Totals	104,405	--	--	--	--	3,476,655

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	10/11/2016 (ppmv as Hexane) ^a
South-Central	MW-SF-1	SVE	242
	MW-SF-2	SVE; TFE	146
	MW-SF-3	SVE; TFE	272
	MW-SF-4	SVE	--
	MW-SF-5	SVE	158
	MW-SF-6	SVE; TFE	428
	MW-SF-9	SVE	--
	MW-SF-10	SVE	242
	MW-SF-11	SVE; TFE	608
	MW-SF-12	SVE; TFE	176
	MW-SF-13	SVE; TFE	92
	MW-SF-14	SVE; TFE	344
	MW-SF-15	SVE; TFE	--
	MW-SF-16	SVE; TFE	--
	MW-SF-17	SVE; TFE	--
	GMW-9	SVE; TFE	252
	GMW-10	SVE	176
	GMW-22	SVE; TFE	252
	GMW-24	SVE; TFE	168
	GMW-25	SVE; GWE	168
	GWR-3	SVE; GWE	936
	VEW-1	SVE	--
	VEW-2	SVE	382
	MW-O-1	SVE; TFE	108
	MW-O-2	SVE; TFE	66
	GMW-O-11	SVE; TFE	524
	GMW-O-12	SVE	1,582
	GMW-O-20	SVE; TFE	1,532
	GMW-O-23	SVE; TFE	1,138
	MW-18 (MID)	SVE	310
	HW-1	SVE	382
	HW-2	SVE	642
Southeastern	GMW-36	SVE; TFE	234
	GMW-O-15	SVE; TFE	234
	GMW-O-18	SVE; TFE	234

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
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

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)
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
7/7/2016	0.014	0.48	21	---	170	---	1,000	220	2,500	1,630	<51
8/2/2016	0.0047	0.54	21	---	260	---	1,900	720	5,000	7,400	<22
9/7/2016	0.0066	0.53	21	---	250	---	1,600	680	3,800	5,000	<21
10/13/2016	0.0096	0.67	21	---	250	---	2,700	680	3,800	5,200	<36
11/1/2016	0.0025	0.62	21	---	260	---	1,600	540	3,800	4,600	<40

SVE system is offline for installation of new RTO as of November 1, 2016.

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	3,410,427	0	3,410,427	--	2,236	2,335
2015 Totals	4,817,906	0	4,817,906	--	5,959	2,605
First Quarter 2016 Totals	767,250	0	767,250	--	4,202	201
Second Quarter 2016 Totals	856,588	0	856,588	--	253	37
Third Quarter 2016 Totals	217,956	0	217,956	--	7.4	0
10/1/2016	0	0	0	390	0.00	
10/2/2016	0	0	0	390	0.00	
10/3/2016	0	0	0	390	0.00	
10/4/2016	0	0	0	390	0.00	
10/5/2016	0	0	0	390	0.00	
10/6/2016	0	0	0	390	0.00	
10/7/2016	0	0	0	390	0.00	
10/8/2016	0	0	0	390	0.00	
10/9/2016	0	0	0	390	0.00	
10/10/2016	0	0	0	390	0.00	
10/11/2016	0	0	0	390	0.00	
10/12/2016	0	0	0	390	0.00	
10/13/2016	0	0	0	390	0.00	

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)
10/14/2016	3,847	0	3,847	390	0.01	
10/15/2016	2	0	2	390	0.00	
10/16/2016	4,707	0	4,707	390	0.02	
10/17/2016	4,141	0	4,141	390	0.01	
10/18/2016	7,167	0	7,167	390	0.02	
10/19/2016	9,525	0	9,525	390	0.03	
10/20/2016	11,859	0	11,859	20,000	1.98	
10/21/2016	13,838	0	13,838	20,000	2.31	
10/22/2016	14,362	0	14,362	20,000	2.39	
10/23/2016	13,680	0	13,680	20,000	2.28	
10/24/2016	13,313	0	13,313	20,000	2.22	
10/25/2016	13,251	0	13,251	20,000	2.21	
10/26/2016	12,953	0	12,953	20,000	2.16	
10/27/2016	13,082	0	13,082	20,000	2.18	
10/28/2016	13,567	0	13,567	20,000	2.26	
10/29/2016	13,301	0	13,301	20,000	2.22	
10/30/2016	13,246	0	13,246	20,000	2.21	
10/31/2016	13,336	0	13,336	20,000	2.22	
11/1/2016	10,929	0	10,929	20,000	1.82	
11/2/2016	7,377	0	7,377	20,000	1.23	
11/3/2016	9,156	0	9,156	20,000	1.53	
11/4/2016	9,049	0	9,049	20,000	1.51	
11/5/2016	9,448	0	9,448	20,000	1.57	
11/6/2016	9,783	0	9,783	20,000	1.63	
11/7/2016	9,807	0	9,807	20,000	1.63	
11/8/2016	9,922	0	9,922	2,800	0.23	
11/9/2016	9,784	0	9,784	2,800	0.23	
11/10/2016	5,511	0	5,511	2,800	0.13	
11/11/2016	0	0	0	2,800	0.00	
11/12/2016	0	0	0	2,800	0.00	
11/13/2016	0	0	0	2,800	0.00	
11/14/2016	0	0	0	2,800	0.00	
11/15/2016	0	0	0	2,800	0.00	
11/16/2016	0	0	0	2,800	0.00	
11/17/2016	0	0	0	2,800	0.00	
11/18/2016	0	0	0	2,800	0.00	

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)
11/19/2016	0	0	0	2,800	0.00	
11/20/2016	0	0	0	2,800	0.00	
11/21/2016	0	0	0	2,800	0.00	
11/22/2016	0	0	0	2,800	0.00	
11/23/2016	0	0	0	2,800	0.00	
11/24/2016	0	0	0	2,800	0.00	
11/25/2016	0	0	0	2,800	0.00	
11/26/2016	0	0	0	2,800	0.00	
11/27/2016	0	0	0	2,800	0.00	
11/28/2016	0	0	0	2,800	0.00	
11/29/2016	0	0	0	2,800	0.00	
11/30/2016	0	0	0	2,800	0.00	
12/1/2016	0	0	0	2,800	0.00	
12/2/2016	0	0	0	2,800	0.00	
12/3/2016	0	0	0	2,800	0.00	
12/4/2016	0	0	0	2,800	0.00	
12/5/2016	0	0	0	2,800	0.00	
12/6/2016	0	0	0	2,800	0.00	
12/7/2016	0	0	0	2,800	0.00	
12/8/2016	6,285	0	6,285	2,800	0.15	
12/9/2016	10,931	0	10,931	2,800	0.25	
12/10/2016	10,529	0	10,529	2,800	0.25	
12/11/2016	10,406	0	10,406	2,800	0.24	
12/12/2016	10,097	0	10,097	2,800	0.24	
12/13/2016	10,097	0	10,097	2,800	0.24	4
12/14/2016	11,431	0	11,431	2,800	0.27	
12/15/2016	12,832	0	12,832	2,800	0.30	
12/16/2016	17,469	0	17,469	2,800	0.41	
12/17/2016	15,817	0	15,817	2,800	0.37	
12/18/2016	15,809	0	15,809	2,800	0.37	
12/19/2016	16,174	0	16,174	2,800	0.38	
12/20/2016	14,530	0	14,530	2,800	0.34	
12/21/2016	12,065	0	12,065	2,800	0.28	
12/22/2016	248	0	248	2,800	0.01	
12/23/2016	10,283	0	10,283	2,800	0.24	
12/24/2016	16,006	0	16,006	2,800	0.37	

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)
12/25/2016	15,508	0	15,508	2,800	0.36	
12/26/2016	15,187	0	15,187	2,800	0.35	
12/27/2016	15,080	0	15,080	660	0.08	
12/28/2016	15,087	0	15,087	660	0.08	
12/29/2016	14,463	0	14,463	660	0.08	
12/30/2016	14,945	0	14,945	660	0.08	
12/31/2016	15,263	0	15,263	660	0.08	
Fourth Quarter 2016 Totals	586,485	0	586,485	--	44.0	4
2016 Totals	2,428,279	0	2,428,279	--	4,506	242
Cumulative Total	72,708,578	26,902,604	99,611,182	--	19,407	14,101

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
SFPF 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
The GWTS was down between June 24 and September 9, 2016, to facilitate installation of the new DAF/OWS.														
9/20/2016	32	230	130	390	--	<0.036	0.18 J	0.080 J	2.6	2.2	150	10	<0.039	<0.039
10/21/2016	10,000	9,300	360	20,000	--	320	320	1,100	2,700	5.1	<0.30	5.3	<0.039	<0.039
11/8/2016	1,100	1,500	130	2,800	--	2.5	<0.036	2.6	160	2.4	66	9.1	<0.039	<0.039
12/27/2016	140	390	130	660	--	1.2	<0.042	<0.042	2.0 J	1.4	2200	8.7	<0.039	<0.039

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)
1/6/2016	0			60	10
2/16/2016	899	899	91.9	500	13
2/23/2016	1,071	172	99.1	500	14
2/29/2016	1,192	121	85.1	500	13
3/1/2016	1,214	22	98.5	500	13
3/8/2016	1,381	167	99.9	500	14
3/10/2016	1,426	45	98.5	500	14
3/22/2016	1,432	6	2.0	240	7
3/31/2016	1,524	92	42.5	180	8
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	--	--

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)
7/1/2016	2,982	0	0.0	120	5
7/7/2016	3,121	139	97.9	250	8
7/12/2016	3,242	121	100.0	420	5
7/19/2016	3,410	168	97.1	420	8
7/26/2016	3,575	165	99.8	420	8
8/2/2016	3,744	169	99.6	425	8
8/11/2016	3,931	187	88.0	240	7
8/16/2016	3,961	30	24.7	220	8
8/24/2016	4,033	72	36.5	120	4
8/25/2016	4,053	20	89.9	220	8
8/26/2016	4,067	14	66.7	78	5
8/30/2016	4,157	90	96.8	300	9
9/6/2016	4,303	146	84.5	85	5
9/13/2016	4,440	137	81.7	400	8
9/20/2016	4,611	171	100.0	586	14
9/27/2016	4,775	164	100.0	559	13
Third Quarter 2016 Totals	4,775	1,793	78.7	--	--
10/7/2016	4,776	1	0.4	110	4
10/8/2016	4,797	21	98.7	170	6
10/11/2016	4,866	69	99.9	420	11
10/13/2016	4,916	50	99.9	563	15
10/18/2016	4,965	49	42.1	120	8
10/25/2016	5,133	168	100.0	585	14
11/1/2016	5,302	169	99.8	598	14
Fourth Quarter 2016 Totals	5,302	527	62.7	--	--
Cumulative Totals	5,302	--	73.7	--	--

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	
8/22/2016	77.16	37.27	---	---	39.89	Kinder Morgan	
10/3/2016	77.16	38.02	---	---	39.14	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
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
	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	
8/22/2016	73.35	33.82	32.93	0.89	40.26	Blaine Tech	
10/3/2016	73.35	35.10	33.65	1.45	39.43	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

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
	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
	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
	10/3/2016	77.24	37.70	---	---	39.54	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

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
	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
	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
	8/22/2016	77.48	38.40	---	---	39.08	Blaine Tech
	10/3/2016	77.48	38.70	---	---	39.44	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

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
	6/10/2014	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
	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
	8/22/2016	78.14	38.44	---	---	39.70	Blaine Tech
	10/3/2016	78.14	38.70	---	---	39.44	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

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
	3/23/2011	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
	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
	10/3/2016	76.66	35.05	34.65	0.40	41.93	Blaine Tech
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

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
	4/13/2011	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
	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
	8/22/2016	74.17	32.75	32.74	0.01	41.43	Kinder Morgan
	10/3/2016	74.17	32.72	32.71	0.01	41.46	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

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	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
	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	Northstar
	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
	8/22/2016	73.49	33.56	31.07	2.49	41.91	Blaine Tech
	10/3/2016	73.49	34.20	31.90	2.30	41.12	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

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
	3/15/2010	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
	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
	10/3/2016	74.23	31.00	30.92	0.08	43.29	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
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	
	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
	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	
12/13/2016	74.36	35.95	31.01	4.94	42.36	Blaine Tech	
12/14/2016	74.36	32.60	---	---	42.36	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

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
	12/19/2008	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
	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
	8/22/2016	73.32	32.18	---	---	41.14	Blaine Tech
	10/3/2016	73.32	33.12	---	---	40.20	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

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
	10/1/2014	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
	8/22/2016	71.43	33.72	---	---	37.71	Blaine Tech
	10/3/2016	71.43	33.45	---	---	37.98	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	
	10/10/2011	73.63	25.25	---	---	48.38	Blaine Tech
	1/9/2012	73.63	25.91	---	---	47.72	Blaine Tech
	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

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
	11/18/2014	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
8/22/2016	73.63	33.89	---	---	39.74	Blaine Tech	
10/3/2016	73.63	34.90	---	---	38.73	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
	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	

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	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
	8/22/2016	77.60	38.24	---	---	39.36	Blaine Tech
	10/3/2016	77.60	39.20	39.15	0.05	38.44	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
	8/22/2016	75.67	40.14	---	---	35.53	Blaine Tech
	10/3/2016	75.67	40.93	---	---	34.74	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
	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

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
	10/17/2008	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
	8/22/2016	75.48	DRY	---	---	NC	Blaine Tech
	10/3/2016	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
	8/22/2016	71.9	33.93	---	---	37.97	Kinder Morgan
	10/3/2016	71.9	34.30	34.22	0.08	37.66	Blaine Tech
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
	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

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
	8/11/2008	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	8/22/2016	78.93	39.04	---	---	39.87	Blaine Tech
	10/3/2016	78.93	39.20	---	---	39.73	Blaine Tech
	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	
8/22/2016	78.53	38.83	---	---	39.70	Blaine Tech	
10/3/2016	78.53	39.60	---	---	38.93	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

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
	12/18/2008	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
	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
	8/22/2016	78.12	38.33	---	---	39.79	Kinder Morgan
	10/3/2016	78.12	39.40	---	---	38.72	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

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
	3/15/2010	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
	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
	8/22/2016	79.38	39.76	---	---	39.62	Blaine Tech
	10/3/2016	79.38	41.05	---	---	38.33	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

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
	4/14/2008	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
	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
	8/22/2016	79.74	DRY	---	---	NC	Blaine Tech
	10/3/2016	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

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
	10/14/2014	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
	8/22/2016	76.8	37.11	---	---	39.69	Blaine Tech
	10/3/2016	76.8	38.45	---	---	38.35	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
	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

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
	10/23/2014	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
	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
	8/22/2016	76.53	DRY	---	---	NC	Blaine Tech
	10/3/2016	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

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
	10/10/2011	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
	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
	8/22/2016	78.56	39.25	---	---	39.31	Blaine Tech
	10/3/2016	78.56	40.05	---	---	38.51	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

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
	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
	8/22/2016	78.07	38.60	---	---	39.47	Blaine Tech
	10/3/2016	78.07	39.45	---	---	38.62	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
	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

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
	6/4/2014	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
	8/22/2016	73.40	33.66	---	---	39.74	Blaine Tech
	10/3/2016	73.40	34.20	---	---	39.20	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
	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

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
	10/27/2014	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
	8/22/2016	78.16	DRY	---	---	NC	Blaine Tech
	10/3/2016	78.16	DRY	---	---	NC	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
	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
	8/22/2016	78.27	38.78	---	---	39.49	Blaine Tech
	10/3/2016	78.27	39.56	---	---	38.71	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

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
	4/21/2009	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
	8/22/2016	78.21	38.51	---	---	39.70	Blaine Tech
	10/3/2016	78.21	39.35	---	---	38.86	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

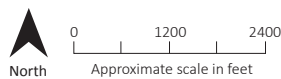
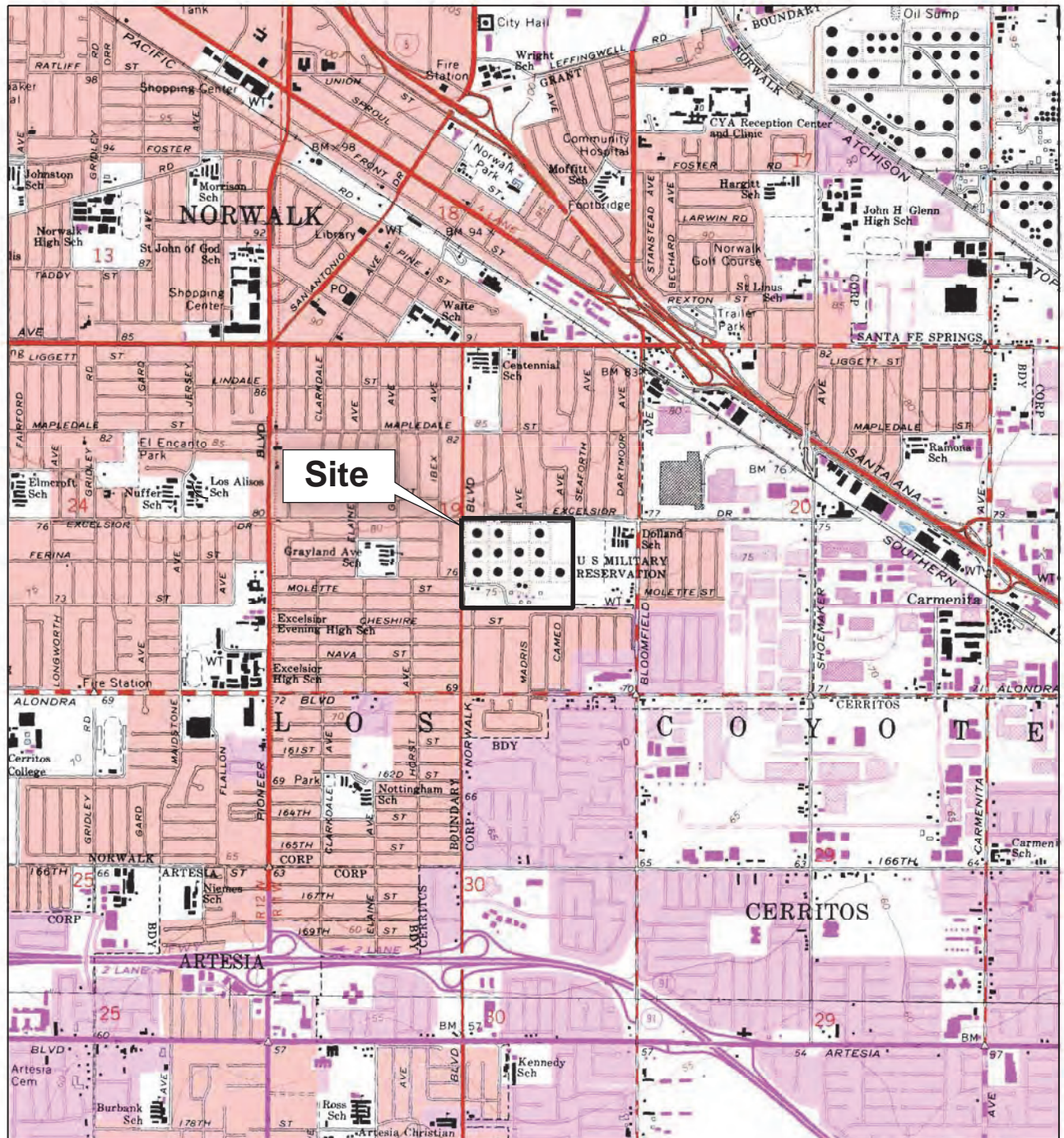
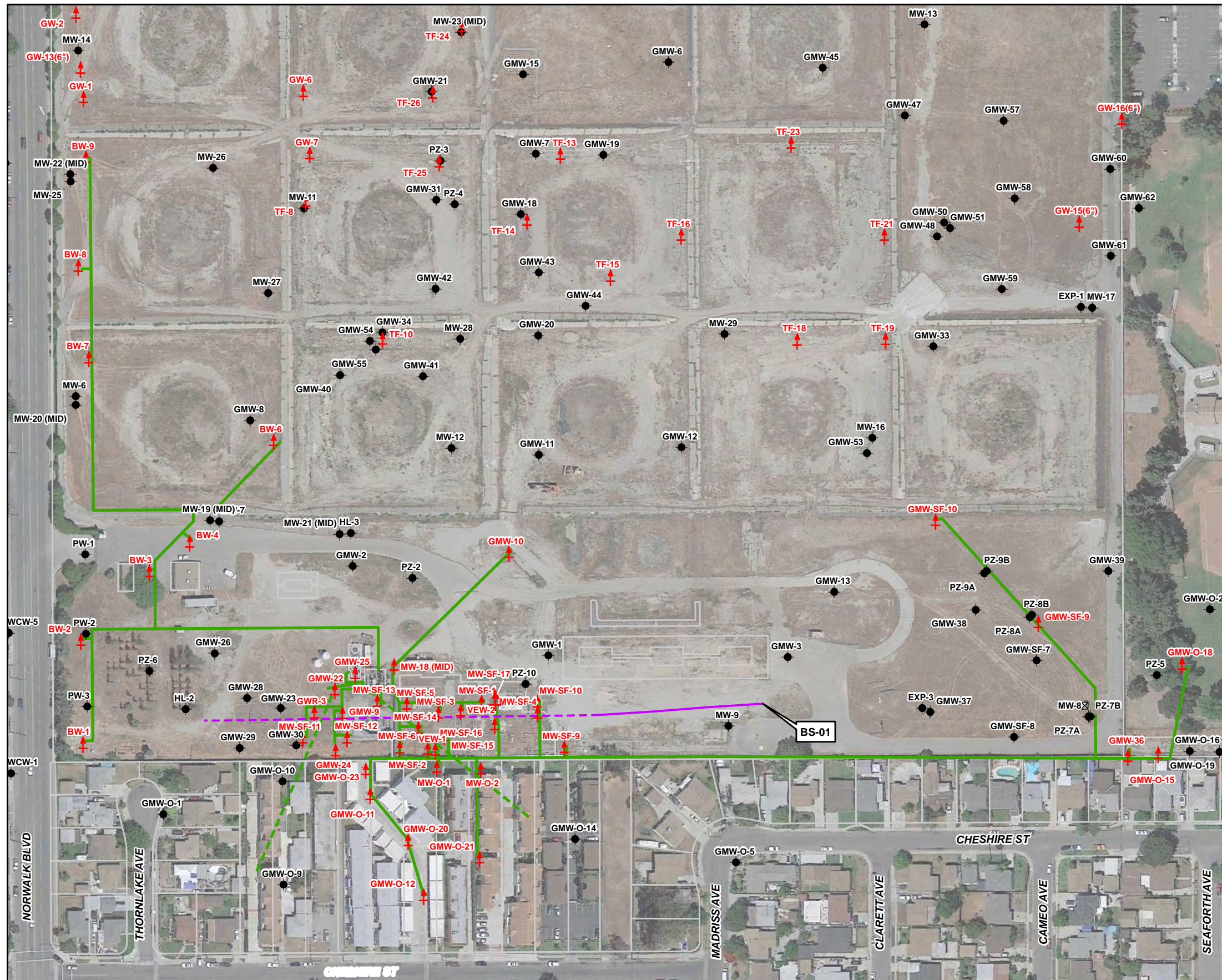


Figure 1
Site Location Map
 SFP Norwalk Pump Station
 Norwalk, California

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.

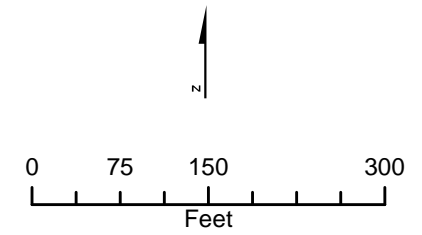


Figure 2
Remediation System Layout
SFPP Norwalk Pump Station
Norwalk, California



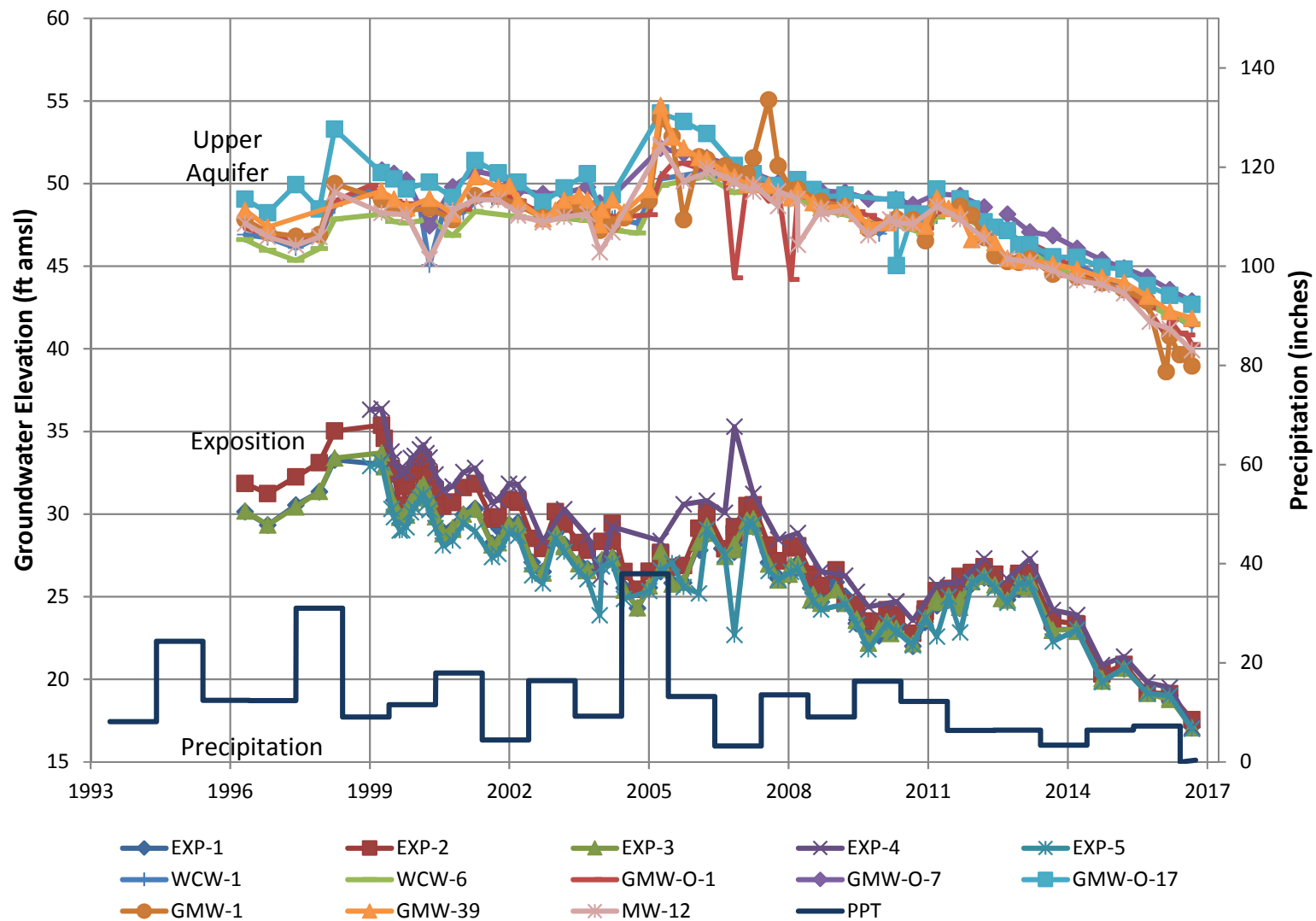


Figure 3
Hydrographs for Select Groundwater Monitoring Wells
SFPP Norwalk Pump Station
Norwalk, California

Appendix A
Laboratory Analytical Reports

October 21, 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: H101410-01/04

Enclosed are results for sample(s) received 10/14/16 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, Kinder Morgan, on 10/21/16.

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 that reads "Mark Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

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

CHAIN OF CUSTODY RECORD

Air Technology Laboratories, Inc.
 18501 Gale Ave # 130
 City of Industry, CA 91748
 Tel: (626) 984-4032
 Joann De La Ossa (JDeLaOssa@airtechlabs.com)

DATE: 10/13/16
 PAGE: 1 OF 1

10410-01/04

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: _____		CLIENT PROJECT NAME / NUMBER: SFPP - Norwalk Site PROJECT CONTACT: James Dye SAMPLER(S): (SIGNATURE) _____		P.O. NO.: _____ QUOTE NO.: _____ LAB USE ONLY: _____	
TURNAROUND TIME <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 / /		REQUESTED ANALYSIS			
SPECIAL INSTRUCTIONS: Report: Jablonski, Daniel/LAC - Daniel.Jablonski@CH2M.com, Cortes, Vidal/SCO - Vidal.Cortes@CH2M.com CC: KIMEP Steve Defibaugh - Steve_Defibaugh@kindermorgan.com "J" flags required/Use lowest possible detection limit - all methods.		TO-3 (TPH, TPN-d, TPH as hexane) TO-15 (VOCs Target Analytes) ASTM-D 1946 (O2/Argon, CO2, CH4, N2)		Comments Individually Certified 6-L SUMMA Individually Certified 6-L SUMMA Individually Certified 1-L SUMMA Batch Certified 1-L SUMMA TAL includes historical VOCs and remaining ATLI List per subcontract.	
LAB USE ONLY:		SAMPLE ID VEFF-10-13 VEFF-10-13-D VPOST-10-13 VINP-10-13		LOCATION/ DESCRIPTION Outlet (stack) Outlet (stack) Dup Post-Dilution Influent Vapor (header)	
DATE 10/13/16 10/13/16 10/13/16 10/13/16		TIME 1155 1155 1305 1318		INITIAL PRESSURE (Hg) -30 -30 -30 -30	
MAT-RIX Air Air Air Air		NO. OF CONT. 1 1 1 1		Received by: (Signature) Received by: (Signature) Received by: (Signature)	
Date: 10/14/16 Time: 1140		Date: 10/14/16 Time: 1140		Date: 10/14/16 Time: 1140	

Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 10/14/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H101410-01			H101410-02			H101410-03			H101410-04		
Client Sample I.D.:	VEFF-10-13			VEFF-10-13-D			VPOST-10-13			VINP-10-13		
Date/Time Sampled:	10/13/16 11:55			10/13/16 11:55			10/13/16 13:05			10/13/16 13:18		
Date/Time Analyzed:	10/20/16 8:35			10/20/16 9:14			10/19/16 19:41			10/20/16 11:52		
QC Batch No.:	161019MS2A1			161019MS2A1			161019MS2A1			161019MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	2.5			2.5			38			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	0.038	0.0058	ND	0.036	0.0055
Chloromethane	0.00087 J	0.0051	0.00056	ND	0.0051	0.00056	ND	0.076	0.0083	ND	0.072	0.0079
1,2-CI-1,1,2,2-F ethane (114)	ND	0.0025	0.00051	ND	0.0025	0.00051	ND	0.038	0.0076	ND	0.036	0.0073
Vinyl Chloride	ND	0.0025	0.00041	ND	0.0025	0.00041	ND	0.038	0.0061	ND	0.036	0.0059
Bromomethane	ND	0.0025	0.00074	0.00093 J	0.0025	0.00074	ND	0.038	0.011	ND	0.036	0.011
Chloroethane	ND	0.0025	0.0021	ND	0.0025	0.0021	ND	0.038	0.032	ND	0.036	0.030
Trichlorofluoromethane (11)	ND	0.0025	0.00054	ND	0.0025	0.00054	ND	0.038	0.0082	ND	0.036	0.0078
1,1-Dichloroethene	ND	0.0025	0.00057	ND	0.0025	0.00057	ND	0.038	0.0086	ND	0.036	0.0082
Carbon Disulfide	0.042	0.013	0.00061	0.061	0.013	0.00061	0.065 J	0.19	0.0091	0.049 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	0.038	0.010	ND	0.036	0.0097
Acetone	0.027	0.013	0.00073	0.013	0.013	0.00073	ND	0.19	0.011	ND	0.18	0.010
Methylene Chloride	ND	0.0025	0.00072	ND	0.0025	0.00072	ND	0.038	0.011	ND	0.036	0.010
t-1,2-Dichloroethene	ND	0.0025	0.00076	ND	0.0025	0.00076	ND	0.038	0.011	ND	0.036	0.011
1,1-Dichloroethane	ND	0.0025	0.00034	ND	0.0025	0.00034	ND	0.038	0.0052	ND	0.036	0.0049
c-1,2-Dichloroethene	ND	0.0025	0.00049	ND	0.0025	0.00049	ND	0.038	0.0073	ND	0.036	0.0070
2-Butanone	0.0061	0.0025	0.0016	0.0091	0.0025	0.0016	ND	0.038	0.023	ND	0.036	0.022
t-Butyl Methyl Ether (MTBE)	ND	0.0025	0.00056	ND	0.0025	0.00056	ND	0.038	0.0085	ND	0.036	0.0081
Chloroform	ND	0.0025	0.00035	ND	0.0025	0.00035	ND	0.038	0.0053	ND	0.036	0.0050
1,1,1-Trichloroethane	ND	0.0025	0.00025	ND	0.0025	0.00025	ND	0.038	0.0038	ND	0.036	0.0036
Carbon Tetrachloride	ND	0.0025	0.00044	ND	0.0025	0.00044	ND	0.038	0.0066	ND	0.036	0.0063
Benzene	0.00038 J	0.0025	0.00024	ND	0.0025	0.00024	2.6	0.038	0.0036	2.7	0.036	0.0035
1,2-Dichloroethane	ND	0.0025	0.00019	ND	0.0025	0.00019	0.017 J	0.038	0.0028	0.018 J	0.036	0.0027
Trichloroethene	ND	0.0025	0.00036	ND	0.0025	0.00036	ND	0.038	0.0054	ND	0.036	0.0051
1,2-Dichloropropane	ND	0.0025	0.00046	ND	0.0025	0.00046	ND	0.038	0.0069	ND	0.036	0.0065
Bromodichloromethane	ND	0.0025	0.00015	ND	0.0025	0.00015	ND	0.038	0.0023	ND	0.036	0.0022
c-1,3-Dichloropropene	ND	0.0025	0.00030	ND	0.0025	0.00030	ND	0.038	0.0045	ND	0.036	0.0043
4-Methyl-2-Pentanone	ND	0.0025	0.00017	ND	0.0025	0.00017	ND	0.038	0.0026	ND	0.036	0.0024
Toluene	0.00043 J	0.0025	0.00020	0.00043 J	0.0025	0.00020	5.5	0.038	0.0030	5.2	0.036	0.0029
t-1,3-Dichloropropene	ND	0.0025	0.00026	ND	0.0025	0.00026	ND	0.038	0.0039	ND	0.036	0.0037
1,1,2-Trichloroethane	ND	0.0025	0.00041	ND	0.0025	0.00041	ND	0.038	0.0061	ND	0.036	0.0058
1,3-Dichloropropane	ND	0.0025	0.00013	ND	0.0025	0.00013	ND	0.038	0.0019	ND	0.036	0.0018
Tetrachloroethene	ND	0.0025	0.00030	ND	0.0025	0.00030	ND	0.038	0.0046	ND	0.036	0.0043
2-Hexanone	ND	0.0025	0.00052	ND	0.0025	0.00052	ND	0.038	0.0078	ND	0.036	0.0074
Dibromochloromethane	ND	0.0025	0.00046	ND	0.0025	0.00046	ND	0.038	0.0069	ND	0.036	0.0066
1,2-Dibromoethane	ND	0.0025	0.00023	ND	0.0025	0.00023	ND	0.038	0.0035	ND	0.036	0.0033
Chlorobenzene	ND	0.0025	0.00020	ND	0.0025	0.00020	0.018 J	0.038	0.0030	0.019 J	0.036	0.0028
Ethylbenzene	ND	0.0025	0.00015	ND	0.0025	0.00015	0.72	0.038	0.0022	0.68	0.036	0.0021
p,&m-Xylene	ND	0.0025	0.00029	ND	0.0025	0.00029	5.4	0.038	0.0043	4.8	0.036	0.0041
o-Xylene	ND	0.0025	0.00031	ND	0.0025	0.00031	3.4	0.038	0.0046	2.9	0.036	0.0044



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 10/14/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H101410-01			H101410-02			H101410-03			H101410-04		
Client Sample I.D.:	VEFF-10-13			VEFF-10-13-D			VPOST-10-13			VINP-10-13		
Date/Time Sampled:	10/13/16 11:55			10/13/16 11:55			10/13/16 13:05			10/13/16 13:18		
Date/Time Analyzed:	10/20/16 8:35			10/20/16 9:14			10/19/16 19:41			10/20/16 11:52		
QC Batch No.:	161019MS2A1			161019MS2A1			161019MS2A1			161019MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	2.5			2.5			38			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	ND	0.0025	0.00032	ND	0.0025	0.00032	0.12	0.038	0.0049	0.100	0.036	0.0046
Bromoform	ND	0.0025	0.00014	ND	0.0025	0.00014	ND	0.038	0.0021	ND	0.036	0.0020
Isopropyl benzene	ND	0.0025	0.00026	ND	0.0025	0.00026	0.064	0.038	0.0040	0.060	0.036	0.0038
1,1,2,2-Tetrachloroethane	ND	0.0051	0.00015	ND	0.0051	0.00015	ND	0.076	0.0023	ND	0.072	0.0022
Benzyl Chloride	ND	0.0025	0.00046	ND	0.0025	0.00046	ND	0.038	0.0070	ND	0.036	0.0066
1,2,3-Trichloropropane	ND	0.0025	0.00068	ND	0.0025	0.00068	ND	0.038	0.010	ND	0.036	0.0097
n-Propyl Benzene	ND	0.0025	0.00015	ND	0.0025	0.00015	0.12	0.038	0.0022	0.11	0.036	0.0021
4-Ethyl Toluene	ND	0.0025	0.00016	ND	0.0025	0.00016	1.7	0.038	0.0024	1.5	0.036	0.0023
1,3,5-Trimethylbenzene	ND	0.0051	0.00044	ND	0.0051	0.00044	0.97	0.076	0.0065	0.84	0.072	0.0062
4-Chlorotoluene	ND	0.0025	0.00030	ND	0.0025	0.00030	ND	0.038	0.0045	ND	0.036	0.0043
tert-Butylbenzene	ND	0.0025	0.00023	ND	0.0025	0.00023	ND	0.038	0.0034	0.10	0.036	0.0033
1,2,4-Trimethylbenzene	ND	0.0051	0.00029	ND	0.0051	0.00029	1.1	0.076	0.0043	0.90	0.072	0.0041
sec-Butylbenzene	ND	0.0025	0.00024	ND	0.0025	0.00024	0.021 J	0.038	0.0037	0.019 J	0.036	0.0035
p-Isopropyltoluene	0.0025	0.0025	0.00033	0.0013 J	0.0025	0.00033	0.021 J	0.038	0.0049	0.021 J	0.036	0.0047
1,3-Dichlorobenzene	ND	0.0025	0.00031	ND	0.0025	0.00031	ND	0.038	0.0046	ND	0.036	0.0044
1,4-Dichlorobenzene	ND	0.0025	0.00037	ND	0.0025	0.00037	ND	0.038	0.0055	ND	0.036	0.0053
n-Butylbenzene	ND	0.0025	0.00018	ND	0.0025	0.00018	ND	0.038	0.0028	ND	0.036	0.0026
1,2-Dichlorobenzene	ND	0.0025	0.00031	ND	0.0025	0.00031	ND	0.038	0.0047	ND	0.036	0.0045
1,2,4-Trichlorobenzene	ND	0.0051	0.00042	ND	0.0051	0.00042	ND	0.076	0.0063	ND	0.072	0.0060
Hexachlorobutadiene	ND	0.0025	0.00015	ND	0.0025	0.00015	ND	0.038	0.0022	ND	0.036	0.0021
t-Butanol	0.00071 J	0.013	0.00048	0.0090 J	0.013	0.00048	ND	0.19	0.0073	ND	0.18	0.0069
n-Hexane	ND	0.013	0.00034	ND	0.013	0.00034	8.6	0.19	0.0051	9.1	0.18	0.0049
Isopropyl ether	ND	0.013	0.00028	ND	0.013	0.00028	ND	0.19	0.0042	ND	0.18	0.0040
t-Butyl ethyl ether	ND	0.013	0.00050	ND	0.013	0.00050	ND	0.19	0.0076	ND	0.18	0.0072
2,2-Dichloropropane	ND	0.013	0.00024	ND	0.013	0.00024	ND	0.19	0.0036	ND	0.18	0.0034
t-Amyl methyl ether	ND	0.013	0.00018	ND	0.013	0.00018	ND	0.19	0.0027	ND	0.18	0.0025
1,4-Dioxane	ND	0.013	0.00044	ND	0.013	0.00044	ND	0.19	0.0066	ND	0.18	0.0063
Naphthalene	ND	0.013	0.00097	ND	0.013	0.00097	ND	0.19	0.015	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.

Reviewed/Approved By: Mark Johnson
 Mark Johnson
 Operations Manager

Date: 10-21-16

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: 10/14/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK													
Client Sample I.D.:	-													
Date/Time Sampled:	-													
Date/Time Analyzed:	10/19/16 16:18													
QC Batch No.:	161019MS2A1													
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	ND	0.00020	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	ND	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	ND	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: Dan Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 10/14/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK													
Client Sample I.D.:	-													
Date/Time Sampled:	-													
Date/Time Analyzed:	10/19/16 16:18													
QC Batch No.:	161019MS2A1													
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 10-21-16

The cover letter is an integral part of this analytical report



QC Batch #: 161019MS2A1

Matrix: Air

EPA Method TO-14/TO-15											
Lab No:	Method Blank		LCS		LCSD						
Date/Time Analyzed:	10/19/16 16:18		10/19/16 14:43		10/19/16 15:23						
Data File ID:	19OCT010.D		19OCT008.D		19OCT009.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	9.7	97	9.2	92	5.3	70	130	30	Pass
Methylene Chloride	0.0	10.0	9.0	90	9.0	90	0.4	70	130	30	Pass
Trichloroethene	0.0	10.0	9.9	99	9.4	94	4.6	70	130	30	Pass
Toluene	0.0	10.0	10.1	101	9.8	98	3.0	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	10.8	108	10.4	104	3.0	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: _____



Mark Johnson
Operations Manager

Date: _____

10-27-16

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: 10/14/16
Matrix: Air
Reporting Units: ppmv

EPA METHOD TO3

Lab No.:	H101410-01			H101410-02			H101410-03			H101410-04		
Client Sample I.D.:	VEFF-10-13			VEFF-10-13-D			VPOST-10-13			VINP-10-13		
Date/Time Sampled:	10/13/16 11:55			10/13/16 11:55			10/13/16 13:05			10/13/16 13:18		
Date/Time Analyzed:	10/17/16 13:24			10/17/16 14:11			10/17/16 14:33			10/17/16 14:56		
QC Batch No.:	161017GC11A1			161017GC11A1			161017GC11A1			161017GC11A1		
Analyst Initials:	AS			AS			AS			AS		
Dilution Factor:	2.5			2.5			2.5			2.5		
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	2.5	0.44	ND	2.5	0.44	320	2.5	0.44	250	2.5	0.44

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 10-21-16

The cover letter is an integral part of this analytical report



QC Batch No: 161017GC11A1

Matrix: Air

Reporting Units: ppmv

EPA METHOD TO3 LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK	LCS	LCSD								
Date Analyzed:	10/17/16 12:59	10/17/16 12:13	10/17/16 12:36								
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	3.65	73	3.87	77	5.9	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 10-21-16

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: 10/14/16
 Matrix: Air
 Reporting Units: % v/v

ASTM D1946

Lab No.:	H101410-04													
Client Sample I.D.:	VINF-10-13													
Date/Time Sampled:	10/13/16 13:18													
Date/Time Analyzed:	10/17/16 12:31													
QC Batch No.:	161017GC8A1													
Analyst Initials:	AS													
Dilution Factor:	2.5													
ANALYTE	Result % v/v	RL % v/v	MDL % v/v											
Carbon Dioxide	0.67	0.025	0.0011											
Oxygen/Argon	21	1.3	0.093											
Nitrogen	78	2.5	0.37											
Methane	0.0096	0.0025	0.00012											

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
 Operations Manager

Date 10-21-16

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

QC for ASTM D1946

Lab No.:	Method Blank	LCS	LCSD						
Date/Time Analyzed:	10/17/16 9:34	10/17/16 8:50	10/17/16 9:05						
Analyst Initials:	AS	AS	AS						
Datafile:	17oct006	17oct003	17oct004						
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	94	70-130%	94	70-130%	0.2	<30
Oxygen/Argon	0.11 J	0.50	0.037	104	70-130%	103	70-130%	0.1	<30
Nitrogen	0.35 J	1.0	0.14	100	70-130%	100	70-130%	0.1	<30
Methane	ND	0.0010	0.000050	108	70-130%	107	70-130%	0.4	<30

ND = Not Detected (Below MDL)

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

Reviewed/Approved By: _____



Mark J. Johnson
Operations Manager

Date: _____

10-27-16

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





November 10, 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: H110210-01/04

Enclosed are results for sample(s) received 11/02/16 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, Kinder Morgan, on 11/09/16.

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 "M. Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

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

H110210-81/04

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: 11/11/16
 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		SAMPLERIST (SIGNATURE) 		LAB USE ONLY						
TEL: 714-429-2020		E-MAIL James.Dye@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 / /		REQUESTED ANALYSIS						
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.		TO-3 (TNT, THF, Toluene, THF, Hexane) TO-15 (VOCs Target Analytes) ASTM-D 1946 (O2/Argon, CO2, CH4, N2)								
		SAMPLING		Comments						
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	DATE	TIME	INITIAL PRESSURE (Hhg)	FINAL PRESSURE (Hhg)	MAT-RIX	NO. OF CONT.		
01	VEFF-11-01	Outlet (stack)	11/11/16	0940	-30	-5	Air	1	X	Individually Certified 6-L SUMMA
02	VEFF-11-01-D	Outlet (stack) Dup	11/11/16	0940	-30	-5	Air	1	X	Individually Certified 6-L SUMMA
03	VPOST-11-01	Post-Dilution	11/11/16	1000	-30	-5	Air	1	X	Individually Certified 1-L SUMMA
04	VINF-11-01	Influent Vapor (header)	11/11/16	0948	-30	-5	Air	1	X	Batch Certified 1-L SUMMA
TAL includes historical VOCs and remaining ATLI List per subcontract.										
Relinquished by (Signature) 		Received by (Signature) FED EX		Date: 11/11/16		Time: 1530				
Relinquished by (Signature) 		Received by (Signature) FED EX		Date: 11/2/16		Time: 1445				
Relinquished by (Signature) 		Received by (Signature) 		Date:		Time:				

Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 11/02/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H110210-01			H110210-02			H110210-03			H110210-04		
Client Sample I.D.:	VEFF-11-01			VEFF-11-01-D			VPOST-11-01			VINP-11-01		
Date/Time Sampled:	11/1/16 9:40			11/1/16 9:40			11/1/16 10:00			11/1/16 9:48		
Date/Time Analyzed:	11/9/16 18:34			11/9/16 19:15			11/9/16 19:56			11/9/16 20:36		
QC Batch No.:	161109MS2A1			161109MS2A1			161109MS2A1			161109MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	2.0			2.0			49			40		
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)	0.00034 J	0.0020	0.00031	ND	0.0020	0.00031	ND	0.049	0.0075	ND	0.040	0.0062
Chloromethane	ND	0.0040	0.00044	0.00098 J	0.0040	0.00044	ND	0.097	0.011	ND	0.081	0.0089
1,2-CI-1,1,2,2-F ethane (114)	ND	0.0020	0.00041	ND	0.0020	0.00041	ND	0.049	0.0098	ND	0.040	0.0081
Vinyl Chloride	ND	0.0020	0.00033	ND	0.0020	0.00033	ND	0.049	0.0079	ND	0.040	0.0066
Bromomethane	ND	0.0020	0.00059	ND	0.0020	0.00059	ND	0.049	0.014	ND	0.040	0.012
Chloroethane	ND	0.0020	0.0017	ND	0.0020	0.0017	ND	0.049	0.041	ND	0.040	0.034
Trichlorofluoromethane (11)	ND	0.0020	0.00044	ND	0.0020	0.00044	ND	0.049	0.010	ND	0.040	0.0087
1,1-Dichloroethene	ND	0.0020	0.00046	ND	0.0020	0.00046	ND	0.049	0.011	ND	0.040	0.0092
Carbon Disulfide	0.079	0.010	0.00048	0.096	0.010	0.00048	0.057 J	0.24	0.012	0.026 J	0.20	0.0097
1,1,2-CI 1,2,2-F ethane (113)	ND	0.0020	0.00054	ND	0.0020	0.00054	ND	0.049	0.013	ND	0.040	0.011
Acetone	0.013	0.010	0.00058	0.010	0.010	0.00058	1.3	0.24	0.014	ND	0.20	0.012
Methylene Chloride	ND	0.0020	0.00058	ND	0.0020	0.00058	ND	0.049	0.014	ND	0.040	0.012
t-1,2-Dichloroethene	ND	0.0020	0.00060	ND	0.0020	0.00060	ND	0.049	0.015	ND	0.040	0.012
1,1-Dichloroethane	ND	0.0020	0.00028	ND	0.0020	0.00028	ND	0.049	0.0066	ND	0.040	0.0055
c-1,2-Dichloroethene	ND	0.0020	0.00039	ND	0.0020	0.00039	ND	0.049	0.0094	ND	0.040	0.0078
2-Butanone	0.0064	0.0020	0.0012	0.0052	0.0020	0.0012	ND	0.049	0.030	ND	0.040	0.025
t-Butyl Methyl Ether (MTBE)	ND	0.0020	0.00045	ND	0.0020	0.00045	ND	0.049	0.011	ND	0.040	0.0090
Chloroform	ND	0.0020	0.00028	ND	0.0020	0.00028	ND	0.049	0.0068	ND	0.040	0.0057
1,1,1-Trichloroethane	ND	0.0020	0.00020	ND	0.0020	0.00020	ND	0.049	0.0049	ND	0.040	0.0041
Carbon Tetrachloride	ND	0.0020	0.00035	ND	0.0020	0.00035	ND	0.049	0.0085	ND	0.040	0.0070
Benzene	0.00089 J	0.0020	0.00019	0.0011 J	0.0020	0.00019	1.1	0.049	0.0047	1.6	0.040	0.0039
1,2-Dichloroethane	ND	0.0020	0.00015	ND	0.0020	0.00015	ND	0.049	0.0036	ND	0.040	0.0030
Trichloroethene	ND	0.0020	0.00029	ND	0.0020	0.00029	ND	0.049	0.0069	ND	0.040	0.0057
1,2-Dichloropropane	ND	0.0020	0.00037	ND	0.0020	0.00037	ND	0.049	0.0088	ND	0.040	0.0073
Bromodichloromethane	ND	0.0020	0.00012	ND	0.0020	0.00012	ND	0.049	0.0029	ND	0.040	0.0024
c-1,3-Dichloropropene	ND	0.0020	0.00024	ND	0.0020	0.00024	ND	0.049	0.0058	ND	0.040	0.0048
4-Methyl-2-Pentanone	ND	0.0020	0.00014	ND	0.0020	0.00014	ND	0.049	0.0033	ND	0.040	0.0027
Toluene	0.0011 J	0.0020	0.00016	0.00098 J	0.0020	0.00016	3.1	0.049	0.0039	4.6	0.040	0.0032
t-1,3-Dichloropropene	ND	0.0020	0.00021	ND	0.0020	0.00021	ND	0.049	0.0050	ND	0.040	0.0042
1,1,2-Trichloroethane	ND	0.0020	0.00033	ND	0.0020	0.00033	ND	0.049	0.0079	ND	0.040	0.0065
1,3-Dichloropropane	ND	0.0020	0.00010	ND	0.0020	0.00010	ND	0.049	0.0024	ND	0.040	0.0020
Tetrachloroethene	ND	0.0020	0.00024	ND	0.0020	0.00024	ND	0.049	0.0058	ND	0.040	0.0049
2-Hexanone	ND	0.0020	0.00042	ND	0.0020	0.00042	ND	0.049	0.010	ND	0.040	0.0083
Dibromochloromethane	ND	0.0020	0.00037	ND	0.0020	0.00037	ND	0.049	0.0089	ND	0.040	0.0074
1,2-Dibromoethane	ND	0.0020	0.00018	ND	0.0020	0.00018	ND	0.049	0.0044	ND	0.040	0.0037
Chlorobenzene	ND	0.0020	0.00016	ND	0.0020	0.00016	ND	0.049	0.0038	0.0034 J	0.040	0.0031
Ethylbenzene	0.00023 J	0.0020	0.00012	ND	0.0020	0.00012	0.32	0.049	0.0028	0.54	0.040	0.0023
p,&m-Xylene	0.0011 J	0.0020	0.00023	0.0012 J	0.0020	0.00023	2.5	0.049	0.0055	4.1	0.040	0.0046
o-Xylene	ND	0.0020	0.00025	0.00040 J	0.0020	0.00025	1.4	0.049	0.0059	2.3	0.040	0.0049

Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 11/02/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	H110210-01			H110210-02			H110210-03			H110210-04		
Client Sample I.D.:	VEFF-11-01			VEFF-11-01-D			VPOST-11-01			VINP-11-01		
Date/Time Sampled:	11/1/16 9:40			11/1/16 9:40			11/1/16 10:00			11/1/16 9:48		
Date/Time Analyzed:	11/9/16 18:34			11/9/16 19:15			11/9/16 19:56			11/9/16 20:36		
QC Batch No.:	161109MS2A1			161109MS2A1			161109MS2A1			161109MS2A1		
Analyst Initials:	DT			DT			DT			DT		
Dilution Factor:	2.0			2.0			49			40		
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	0.0020	0.00026	ND	0.0020	0.00026	0.049	0.049	0.0062	0.087	0.040	0.0052
Bromoform	ND	0.0020	0.00011	ND	0.0020	0.00011	ND	0.049	0.0027	ND	0.040	0.0023
Isopropyl benzene	ND	0.0020	0.00021	ND	0.0020	0.00021	0.030 J	0.049	0.0051	0.049	0.040	0.0042
1,1,2,2-Tetrachloroethane	ND	0.0040	0.00012	ND	0.0040	0.00012	ND	0.097	0.0030	ND	0.081	0.0025
Benzyl Chloride	ND	0.0020	0.00037	ND	0.0020	0.00037	ND	0.049	0.0089	ND	0.040	0.0074
1,2,3-Trichloropropane	ND	0.0020	0.00054	ND	0.0020	0.00054	ND	0.049	0.013	ND	0.040	0.011
n-Propyl Benzene	ND	0.0020	0.00012	ND	0.0020	0.00012	0.056	0.049	0.0028	0.093	0.040	0.0024
4-Ethyl Toluene	ND	0.0020	0.00013	0.00043 J	0.0020	0.00013	0.57	0.049	0.0031	1.1	0.040	0.0026
1,3,5-Trimethylbenzene	ND	0.0040	0.00035	ND	0.0040	0.00035	0.34	0.097	0.0084	0.60	0.081	0.0070
4-Chlorotoluene	ND	0.0020	0.00024	ND	0.0020	0.00024	ND	0.049	0.0058	ND	0.040	0.0048
tert-Butylbenzene	ND	0.0020	0.00018	ND	0.0020	0.00018	0.052	0.049	0.0044	ND	0.040	0.0037
1,2,4-Trimethylbenzene	0.00062 J	0.0040	0.00023	0.00065 J	0.0040	0.00023	0.36	0.097	0.0055	0.67	0.081	0.0046
sec-Butylbenzene	ND	0.0020	0.00020	ND	0.0020	0.00020	0.0095 J	0.049	0.0047	0.017 J	0.040	0.0039
p-Isopropyltoluene	0.00059 J	0.0020	0.00026	0.0010 J	0.0020	0.00026	0.028 J	0.049	0.0063	0.017 J	0.040	0.0053
1,3-Dichlorobenzene	ND	0.0020	0.00025	ND	0.0020	0.00025	ND	0.049	0.0059	ND	0.040	0.0049
1,4-Dichlorobenzene	ND	0.0020	0.00030	ND	0.0020	0.00030	ND	0.049	0.0071	ND	0.040	0.0059
n-Butylbenzene	ND	0.0020	0.00015	ND	0.0020	0.00015	ND	0.049	0.0035	ND	0.040	0.0030
1,2-Dichlorobenzene	ND	0.0020	0.00025	ND	0.0020	0.00025	ND	0.049	0.0060	ND	0.040	0.0050
1,2,4-Trichlorobenzene	ND	0.0040	0.00033	ND	0.0040	0.00033	ND	0.097	0.0080	ND	0.081	0.0067
Hexachlorobutadiene	ND	0.0020	0.00012	ND	0.0020	0.00012	ND	0.049	0.0029	ND	0.040	0.0024
t-Butanol	ND	0.010	0.00039	ND	0.010	0.00039	ND	0.24	0.0093	ND	0.20	0.0078
n-Hexane	ND	0.010	0.00027	ND	0.010	0.00027	6.3	0.24	0.0065	6.2	0.20	0.0054
Isopropyl ether	ND	0.010	0.00022	ND	0.010	0.00022	ND	0.24	0.0054	ND	0.20	0.0045
t-Butyl ethyl ether	ND	0.010	0.00040	ND	0.010	0.00040	ND	0.24	0.0097	ND	0.20	0.0081
2,2-Dichloropropane	ND	0.010	0.00019	ND	0.010	0.00019	ND	0.24	0.0046	ND	0.20	0.0038
t-Amyl methyl ether	ND	0.010	0.00014	ND	0.010	0.00014	ND	0.24	0.0034	ND	0.20	0.0029
1,4-Dioxane	ND	0.010	0.00035	ND	0.010	0.00035	ND	0.24	0.0085	ND	0.20	0.0071
Naphthalene	ND	0.010	0.00078	ND	0.010	0.00078	ND	0.24	0.019	ND	0.20	0.016
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
 Mark Johnson
 Operations Manager

Date: 11/9/16

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: 11/02/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK													
Client Sample I.D.:	--													
Date/Time Sampled:	--													
Date/Time Analyzed:	11/9/16 12:56													
QC Batch No.:	161109MS2A1													
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	ND	0.00020	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	0.000067 J	0.0010	0.000048											
1,1,2-CI 1,2,2-F ethane (113)	ND	0.00020	0.000054											
Acetone	ND	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	0.000081 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	0.000022 J	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	0.000033 J	0.00020	0.000016											
Ethylbenzene	ND	0.00020	0.000011											
p.&m-Xylene	0.000041 J	0.00020	0.000023											
o-Xylene	ND	0.00020	0.000024											



Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 11/02/16
 Matrix: Air
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK													
Client Sample I.D.:	--													
Date/Time Sampled:	--													
Date/Time Analyzed:	11/9/16 12:56													
QC Batch No.:	161109MS2A1													
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	0.000022 J	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	0.000089 J	0.00020	0.000024											
1,4-Dichlorobenzene	0.00012 J	0.00020	0.000029											
n-Butylbenzene	0.000040 J	0.00020	0.000015											
1,2-Dichlorobenzene	0.000074 J	0.00020	0.000025											
1,2,4-Trichlorobenzene	0.00026 J	0.00040	0.000033											
Hexachlorobutadiene	0.00033	0.00020	0.000012											
t-Butanol	ND	0.0010	0.000038											
n-Hexane	0.00059 J	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 11/9/16

The cover letter is an integral part of this analytical report



QC Batch #: 161109MS2A1

Matrix: Air

EPA Method TO-14/TO-15

Lab No:		Method Blank	LCS		LCSD						
Date/Time Analyzed:		11/9/16 12:56	11/9/16 16:33	11/9/16 17:13							
Data File ID:		08NOV019.D	08NOV024.D	08NOV025.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	10.4	104	9.5	95	9.3	70	130	30	Pass
Methylene Chloride	0.0	10.0	10.6	106	9.9	99	6.8	70	130	30	Pass
Trichloroethene	0.0	10.0	10.3	103	9.7	97	5.8	70	130	30	Pass
Toluene	0.0	10.0	10.5	105	9.8	98	6.7	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	11.0	110	10.4	104	5.6	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: _____

Mark Johnson
Operations Manager

Date: _____

11/9/16

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Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 11/02/16
 Matrix: Air
 Reporting Units: ppmv

EPA METHOD TO3												
Lab No.:	H110210-01			H110210-02			H110210-03			H110210-04		
Client Sample I.D.:	VEFF-11-01			VEFF-11-01-D			VPOST-11-01			VINP-11-01		
Date/Time Sampled:	11/1/16 9:40			11/1/16 9:40			11/1/16 10:00			11/1/16 9:48		
Date/Time Analyzed:	11/8/16 12:25			11/8/16 12:47			11/8/16 15:21			11/8/16 14:41		
QC Batch No.:	161108GC11A1			161108GC11A1			161108GC11A1			161108GC11A1		
Analyst Initials:	AS			AS			AS			AS		
Dilution Factor:	2.0			2.0			5.8			2.0		
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	2.0	0.36	ND	2.0	0.36	330	5.8	1.0	260	2.0	0.36

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 11-9-16

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QC Batch No: 161108GC11A1

Matrix: Air

Reporting Units: ppmv

EPA METHOD TO3
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK			LCS		LCSD					
Date Analyzed:	11/8/16 10:53			11/8/16 10:07		11/8/16 10:30					
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	3.91	78	3.94	79	0.8	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
Operations Manager

Date 11-9-16

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Client: CH2M Hill
 Attn: Dan Jablonski
 Project Name: SFPP - Norwalk Site
 Project No.: NA
 Date Received: 11/02/16
 Matrix: Air
 Reporting Units: % v/v

ASTM D1946

Lab No.:	H110210-04			
Client Sample I.D.:	VINF-11-01			
Date/Time Sampled:	11/1/16 9:48			
Date/Time Analyzed:	11/7/16 13:54			
QC Batch No.:	161107GC8A1			
Analyst Initials:	AS			
Dilution Factor:	2.0			

ANALYTE	Result % v/v	RL % v/v	MDL % v/v									
Carbon Dioxide	0.62	0.020	0.00086									
Oxygen/Argon	21	1.0	0.074									
Nitrogen	78	2.0	0.29									
Methane	0.0025	0.0020	0.000092									

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
 Operations Manager

Date 11-9-16

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QC Batch No.: 161107GC8A1
Matrix: Air
Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank	LCS	LCSD						
Date/Time Analyzed:	11/7/16 13:38	11/7/16 12:53	11/7/16 13:08						
Analyst Initials:	AS	AS	AS						
Datafile:	07nov010	07nov007	07nov008						
Dilution Factor:	1.0	1.0	1.0						
ANALYTE	Results	RL	MDL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Carbon Dioxide	0.00045 J	0.010	0.00042	91	70-130%	91	70-130%	0.1	<30
Oxygen/Argon	0.080 J	0.50	0.037	95	70-130%	95	70-130%	0.0	<30
Nitrogen	0.27 J	1.0	0.14	92	70-130%	92	70-130%	0.0	<30
Methane	0.00045 J	0.0010	0.000050	108	70-130%	107	70-130%	0.5	<30

ND = Not Detected (Below MDL)
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By:  Date: 11-9-16
Mark J. Johnson
Operations Manager

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October 27, 2016

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

TEL:

FAX:

Workorder No.: N021360

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on October 21, 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,



Puri Romualdo
Laboratory Director

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CLIENT: CH2MHill
Project: SFPP - Norwalk Site
Lab Order: N021360

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: GRO/DRO/ORO:

Sample required dilution due to high concentration of target analytes.

Analytical Comments for EPA 8260B:

Sample required dilution due to high concentration of target analytes.



CLIENT: CH2MHill
Project: SFPP - Norwalk Site
Lab Order: N021360
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N021360-001A	INF-10-21	Wastewater	10/21/2016 1:30:00 PM	10/21/2016	10/27/2016
N021360-001B	INF-10-21	Wastewater	10/21/2016 1:30:00 PM	10/21/2016	10/27/2016



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 27-Oct-16

CLIENT: CH2MHill
Lab Order: N021360
Project: SFPP - Norwalk Site
Lab ID: N021360-001

Client Sample ID: INF-10-21
Collection Date: 10/21/2016 1:30:00 PM
Matrix: WASTEWATER

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

EPA 8260B

RunID: CA01638-MS08_161022A	QC Batch: CA16VW021	PrepDate:	Analyst: RB			
1,1,1,2-Tetrachloroethane	ND	0.066	1.0	ug/L	1	10/22/2016 04:09 PM
1,1,1-Trichloroethane	ND	0.068	1.0	ug/L	1	10/22/2016 04:09 PM
1,1,2,2-Tetrachloroethane	ND	0.031	1.0	ug/L	1	10/22/2016 04:09 PM
1,1,2-Trichloroethane	ND	0.062	1.0	ug/L	1	10/22/2016 04:09 PM
1,1-Dichloroethane	ND	0.022	0.50	ug/L	1	10/22/2016 04:09 PM
1,1-Dichloroethene	ND	0.087	1.0	ug/L	1	10/22/2016 04:09 PM
1,1-Dichloropropene	ND	0.044	1.0	ug/L	1	10/22/2016 04:09 PM
1,2,3-Trichlorobenzene	ND	0.056	1.0	ug/L	1	10/22/2016 04:09 PM
1,2,3-Trichloropropane	ND	0.059	1.0	ug/L	1	10/22/2016 04:09 PM
1,2,4-Trichlorobenzene	ND	0.060	1.0	ug/L	1	10/22/2016 04:09 PM
1,2,4-Trimethylbenzene	990	0.84	20	ug/L	20	10/22/2016 05:00 PM
1,2-Dibromo-3-chloropropane	ND	0.047	2.0	ug/L	1	10/22/2016 04:09 PM
1,2-Dibromoethane	ND	0.057	1.0	ug/L	1	10/22/2016 04:09 PM
1,2-Dichlorobenzene	ND	0.040	1.0	ug/L	1	10/22/2016 04:09 PM
1,2-Dichloroethane	ND	0.064	0.50	ug/L	1	10/22/2016 04:09 PM
1,2-Dichloropropane	ND	0.062	1.0	ug/L	1	10/22/2016 04:09 PM
1,3,5-Trimethylbenzene	260	0.075	5.0	ug/L	5	10/22/2016 04:34 PM
1,3-Dichlorobenzene	ND	0.057	1.0	ug/L	1	10/22/2016 04:09 PM
1,3-Dichloropropane	ND	0.040	1.0	ug/L	1	10/22/2016 04:09 PM
1,4-Dichlorobenzene	ND	0.030	1.0	ug/L	1	10/22/2016 04:09 PM
2,2-Dichloropropane	ND	0.026	1.0	ug/L	1	10/22/2016 04:09 PM
2-Butanone	ND	0.48	10	ug/L	1	10/22/2016 04:09 PM
2-Chlorotoluene	ND	0.040	1.0	ug/L	1	10/22/2016 04:09 PM
4-Chlorotoluene	ND	0.036	1.0	ug/L	1	10/22/2016 04:09 PM
4-Isopropyltoluene	6.8	0.022	1.0	ug/L	1	10/22/2016 04:09 PM
4-Methyl-2-pentanone	ND	0.17	10	ug/L	1	10/22/2016 04:09 PM
Acetone	4.4	1.1	10	J ug/L	1	10/22/2016 04:09 PM
Benzene	320	0.18	5.0	ug/L	5	10/22/2016 04:34 PM
Bromobenzene	ND	0.043	1.0	ug/L	1	10/22/2016 04:09 PM
Bromochloromethane	ND	0.22	1.0	ug/L	1	10/22/2016 04:09 PM
Bromodichloromethane	ND	0.031	1.0	ug/L	1	10/22/2016 04:09 PM
Bromoform	ND	0.32	1.0	ug/L	1	10/22/2016 04:09 PM
Bromomethane	ND	0.32	1.0	ug/L	1	10/22/2016 04:09 PM
Carbon disulfide	0.47	0.025	1.0	J ug/L	1	10/22/2016 04:09 PM
Carbon tetrachloride	ND	0.057	0.50	ug/L	1	10/22/2016 04:09 PM
Chlorobenzene	ND	0.036	1.0	ug/L	1	10/22/2016 04:09 PM

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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ORELAP/NELAP Cert 4046

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ANALYTICAL RESULTS

Print Date: 27-Oct-16

ASSET Laboratories

CLIENT: CH2MHill
Lab Order: N021360
Project: SFPP - Norwalk Site
Lab ID: N021360-001

Client Sample ID: INF-10-21
Collection Date: 10/21/2016 1:30:00 PM
Matrix: WASTEWATER

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

EPA 8260B

RunID: CA01638-MS08_161022A	QC Batch: CA16VW021				PrepDate:	Analyst: RB
Chloroethane	ND	0.099	1.0		ug/L	1 10/22/2016 04:09 PM
Chloroform	ND	0.036	1.0		ug/L	1 10/22/2016 04:09 PM
Chloromethane	ND	0.12	1.0		ug/L	1 10/22/2016 04:09 PM
cis-1,2-Dichloroethene	ND	0.051	1.0		ug/L	1 10/22/2016 04:09 PM
cis-1,3-Dichloropropene	ND	0.044	1.0		ug/L	1 10/22/2016 04:09 PM
Di-isopropyl ether	5.3	0.017	1.0		ug/L	1 10/22/2016 04:09 PM
Dibromochloromethane	ND	0.072	1.0		ug/L	1 10/22/2016 04:09 PM
Dibromomethane	ND	0.17	1.0		ug/L	1 10/22/2016 04:09 PM
Dichlorodifluoromethane	ND	0.070	1.0		ug/L	1 10/22/2016 04:09 PM
Ethyl tert-butyl ether	ND	0.039	1.0		ug/L	1 10/22/2016 04:09 PM
Ethylbenzene	320	0.18	5.0		ug/L	5 10/22/2016 04:34 PM
Freon-113	ND	0.074	1.0		ug/L	1 10/22/2016 04:09 PM
Hexachlorobutadiene	ND	0.11	1.0		ug/L	1 10/22/2016 04:09 PM
Isopropylbenzene	22	0.034	1.0		ug/L	1 10/22/2016 04:09 PM
m,p-Xylene	2000	0.48	20		ug/L	20 10/22/2016 05:00 PM
Methylene chloride	ND	0.28	2.0		ug/L	1 10/22/2016 04:09 PM
MTBE	5.1	0.062	1.0		ug/L	1 10/22/2016 04:09 PM
n-Butylbenzene	21	0.031	1.0		ug/L	1 10/22/2016 04:09 PM
n-Propylbenzene	86	0.018	1.0		ug/L	1 10/22/2016 04:09 PM
Naphthalene	240	0.24	5.0		ug/L	5 10/22/2016 04:34 PM
o-Xylene	750	0.84	20		ug/L	20 10/22/2016 05:00 PM
sec-Butylbenzene	8.8	0.025	1.0		ug/L	1 10/22/2016 04:09 PM
Styrene	0.97	0.035	1.0	J	ug/L	1 10/22/2016 04:09 PM
Tert-amyl methyl ether	ND	0.039	1.0		ug/L	1 10/22/2016 04:09 PM
Tert-Butanol	ND	0.30	5.0		ug/L	1 10/22/2016 04:09 PM
tert-Butylbenzene	ND	0.030	1.0		ug/L	1 10/22/2016 04:09 PM
Tetrachloroethene	ND	0.16	1.0		ug/L	1 10/22/2016 04:09 PM
Toluene	1100	0.84	40		ug/L	20 10/22/2016 05:00 PM
trans-1,2-Dichloroethene	ND	0.070	1.0		ug/L	1 10/22/2016 04:09 PM
trans-1,3-Dichloropropene	ND	0.039	1.0		ug/L	1 10/22/2016 04:09 PM
Trichloroethene	ND	0.12	1.0		ug/L	1 10/22/2016 04:09 PM
Trichlorofluoromethane	ND	0.031	1.0		ug/L	1 10/22/2016 04:09 PM
Vinyl chloride	ND	0.095	0.50		ug/L	1 10/22/2016 04:09 PM
Xylenes, Total	2700	30	40		ug/L	20 10/22/2016 05:00 PM
Surr: 1,2-Dichloroethane-d4	93.2	0	72-119		%REC	1 10/22/2016 04:09 PM
Surr: 1,2-Dichloroethane-d4	89.9	0	72-119		%REC	5 10/22/2016 04:34 PM

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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"Servina Clients with Passion and Professionalism"

ANALYTICAL RESULTS

Print Date: 27-Oct-16

ASSET Laboratories

CLIENT: CH2MHill
Lab Order: N021360
Project: SFPP - Norwalk Site
Lab ID: N021360-001

Client Sample ID: INF-10-21
Collection Date: 10/21/2016 1:30:00 PM
Matrix: WASTEWATER

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

EPA 8260B

RunID:	CA01638-MS08_161022A	QC Batch:	CA16VW021	PrepDate:	Analyst: RB		
Surr:	1,2-Dichloroethane-d4	90.4	0	72-119	%REC	20	10/22/2016 05:00 PM
Surr:	4-Bromofluorobenzene	94.7	0	76-119	%REC	1	10/22/2016 04:09 PM
Surr:	4-Bromofluorobenzene	96.8	0	76-119	%REC	20	10/22/2016 05:00 PM
Surr:	4-Bromofluorobenzene	97.7	0	76-119	%REC	5	10/22/2016 04:34 PM
Surr:	Dibromofluoromethane	99.2	0	85-115	%REC	20	10/22/2016 05:00 PM
Surr:	Dibromofluoromethane	99.8	0	85-115	%REC	5	10/22/2016 04:34 PM
Surr:	Dibromofluoromethane	102	0	85-115	%REC	1	10/22/2016 04:09 PM
Surr:	Toluene-d8	99.2	0	81-120	%REC	1	10/22/2016 04:09 PM
Surr:	Toluene-d8	98.3	0	81-120	%REC	20	10/22/2016 05:00 PM
Surr:	Toluene-d8	99.5	0	81-120	%REC	5	10/22/2016 04:34 PM

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

RunID:	NV00922-GC3_161025A	QC Batch:	60075	PrepDate:	10/25/2016	Analyst: FJ	
TPH-Diesel (C13-C22)		9300	150	250	ug/L	10	10/25/2016 06:46 PM
TPH-Oil (C23-C36)		360	14	25	ug/L	1	10/25/2016 04:08 PM
Surr: Octacosane		96.8	0	26-152	%REC	1	10/25/2016 04:08 PM
Surr: p-Terphenyl		111	0	57-132	%REC	1	10/25/2016 04:08 PM

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

RunID:	NV00922-GC4_161024A	QC Batch:	E16VW069	PrepDate:	Analyst: QBM		
TPH-Gasoline (C4-C12)		10000	160	500	ug/L	10	10/24/2016 05:09 PM
Surr: Chlorobenzene - d5		88.9	0	74-138	%REC	10	10/24/2016 05:09 PM

TOTAL TPH

EPA 8015B

RunID:	NV00922-GC3_161025A	QC Batch:	R111288	PrepDate:	Analyst: FJ		
Total TPH		20000	16	50	ug/L	1	10/25/2016

<p>Qualifiers:</p> <p>B Analyte detected in the associated Method Blank</p> <p>H Holding times for preparation or analysis exceeded</p> <p>ND Not Detected at the Reporting Limit</p> <p>Results are wet unless otherwise specified</p>	<p>E Value above quantitation range</p> <p>J Analyte detected below quantitation limits</p> <p>S Spike/Surrogate outside of limits due to matrix interference</p> <p>DO Surrogate Diluted Out</p>
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CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: MB-60075	SampType: MBLK	TestCode: 8015_W_FP_	Units: ug/L	Prep Date: 10/25/2016	RunNo: 111288						
Client ID: PBW	Batch ID: 60075	TestNo: EPA 8015B EPA 3510C		Analysis Date: 10/25/2016	SeqNo: 2458505						
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	54.857		80.00		68.6	26	152				
Surr: p-Terphenyl	61.693		80.00		77.1	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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CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: MB-R111288	SampType: MBLK	TestCode: 8015_W_SFP Units: ug/L	Prep Date:	RunNo: 111288							
Client ID: PBW	Batch ID: R111288	TestNo: EPA 8015B	Analysis Date: 10/25/2016	SeqNo: 2458509							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	37.000	50									J

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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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFP

Sample ID: E161024LCS	SampType: LCS	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111269							
Client ID: LCSW	Batch ID: E16VW069	TestNo: EPA 8015B	Analysis Date: 10/24/2016	SeqNo: 2457500							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	845.000	50	1000	0	84.5	67	136				
Surr: Chlorobenzene - d5	47900.000		50000		95.8	74	138				

Sample ID: E161024MB1	SampType: MBLK	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111269							
Client ID: PBW	Batch ID: E16VW069	TestNo: EPA 8015B	Analysis Date: 10/24/2016	SeqNo: 2457501							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	37.000	50									J
Surr: Chlorobenzene - d5	51728.000		50000		103	74	138				

Sample ID: N021359-001BDUP	SampType: DUP	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111269							
Client ID: ZZZZZ	Batch ID: E16VW069	TestNo: EPA 8015B	Analysis Date: 10/24/2016	SeqNo: 2457503							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	34.000	50						0	0	0	J
Surr: Chlorobenzene - d5	58366.000		50000		117	74	138		0	0	

Sample ID: N021359-001BMS	SampType: MS	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111269							
Client ID: ZZZZZ	Batch ID: E16VW069	TestNo: EPA 8015B	Analysis Date: 10/24/2016	SeqNo: 2457505							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	828.000	50	1000	0	82.8	67	136				
Surr: Chlorobenzene - d5	48376.000		50000		96.8	74	138				

Sample ID: N021359-001BMSD	SampType: MSD	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111269							
Client ID: ZZZZZ	Batch ID: E16VW069	TestNo: EPA 8015B	Analysis Date: 10/24/2016	SeqNo: 2457506							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	849.000	50	1000	0	84.9	67	136	828.0	2.50	30	
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Qualifiers:

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|--|--|--|
| 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 |

CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Sample ID: N021359-001BMSD	SampType: MSD	TestCode: 8015GAS_WS	Units: ug/L	Prep Date:	RunNo: 111269						
Client ID: ZZZZZZ	Batch ID: E16VW069	TestNo: EPA 8015B		Analysis Date: 10/24/2016	SeqNo: 2457506						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Chlorobenzene - d5	48700.000		50000		97.4	74	138		0	0	

Qualifiers:

- | | | |
|--|--|--|
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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161022LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111246						
Client ID: LCSW	Batch ID: CA16VW021	TestNo: EPA 8260B		Analysis Date: 10/22/2016	SeqNo: 2456449						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	24.880	1.0	20.00	0	124	81	129				
1,1,1-Trichloroethane	21.380	1.0	20.00	0	107	67	132				
1,1,2,2-Tetrachloroethane	20.930	1.0	20.00	0	105	63	128				
1,1,2-Trichloroethane	20.790	1.0	20.00	0	104	75	125				
1,1-Dichloroethane	18.230	0.50	20.00	0	91.2	69	133				
1,1-Dichloroethene	19.910	1.0	20.00	0	99.6	68	130				
1,1-Dichloropropene	21.250	1.0	20.00	0	106	73	132				
1,2,3-Trichlorobenzene	24.460	1.0	20.00	0	122	67	137				
1,2,3-Trichloropropane	19.940	1.0	20.00	0	99.7	73	124				
1,2,4-Trichlorobenzene	23.470	1.0	20.00	0	117	66	134				
1,2,4-Trimethylbenzene	22.140	1.0	20.00	0	111	74	132				
1,2-Dibromo-3-chloropropane	22.080	2.0	20.00	0	110	50	132				
1,2-Dibromoethane	22.770	1.0	20.00	0	114	80	121				
1,2-Dichlorobenzene	23.310	1.0	20.00	0	117	71	122				
1,2-Dichloroethane	20.440	0.50	20.00	0	102	69	132				
1,2-Dichloropropane	19.890	1.0	20.00	0	99.4	75	125				
1,3,5-Trimethylbenzene	22.510	1.0	20.00	0	113	74	131				
1,3-Dichlorobenzene	23.170	1.0	20.00	0	116	75	124				
1,3-Dichloropropane	20.870	1.0	20.00	0	104	73	126				
1,4-Dichlorobenzene	22.480	1.0	20.00	0	112	74	123				
2,2-Dichloropropane	20.750	1.0	20.00	0	104	69	137				
2-Butanone	222.740	10	200.0	0	111	49	136				
2-Chlorotoluene	21.060	1.0	20.00	0	105	73	126				
4-Chlorotoluene	21.280	1.0	20.00	0	106	74	128				
4-Isopropyltoluene	22.420	1.0	20.00	0	112	73	130				
4-Methyl-2-pentanone	192.250	10	200.0	0	96.1	58	134				
Acetone	218.870	10	200.0	0	109	40	135				
Benzene	20.680	1.0	20.00	0	103	81	122				
Bromobenzene	23.470	1.0	20.00	0	117	76	124				
Bromochloromethane	22.630	1.0	20.00	0	113	65	129				

Qualifiers:

- | | | |
|--|--|--|
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CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161022LCS	SampType: LCS	TestCode: 8260_WP_SF Units: ug/L				Prep Date:			RunNo: 111246		
Client ID: LCSW	Batch ID: CA16VW021	TestNo: EPA 8260B				Analysis Date: 10/22/2016			SeqNo: 2456449		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	22.850	1.0	20.00	0	114	76	121				
Bromoform	24.250	1.0	20.00	0	121	69	128				
Bromomethane	20.550	1.0	20.00	0	103	53	141				
Carbon disulfide	21.390	1.0	20.00	0	107	75	125				
Carbon tetrachloride	25.300	0.50	20.00	0	127	66	138				
Chlorobenzene	22.660	1.0	20.00	0	113	81	122				
Chloroethane	20.110	1.0	20.00	0	101	58	133				
Chloroform	20.310	1.0	20.00	0	102	69	128				
Chloromethane	16.150	1.0	20.00	0	80.8	56	131				
cis-1,2-Dichloroethene	20.300	1.0	20.00	0	102	72	126				
cis-1,3-Dichloropropene	22.070	1.0	20.00	0	110	69	131				
Di-isopropyl ether	17.320	1.0	20.00	0	86.6	70	130				
Dibromochloromethane	26.190	1.0	20.00	0	131	66	133				
Dibromomethane	21.950	1.0	20.00	0	110	76	125				
Dichlorodifluoromethane	21.760	1.0	20.00	0	109	53	153				
Ethyl tert-butyl ether	18.900	1.0	20.00	0	94.5	70	130				
Ethylbenzene	20.490	1.0	20.00	0	102	73	127				
Freon-113	21.220	1.0	20.00	0	106	75	125				
Hexachlorobutadiene	24.460	1.0	20.00	0	122	67	131				
Isopropylbenzene	21.870	1.0	20.00	0	109	75	127				
m,p-Xylene	45.230	1.0	40.00	0	113	76	128				
Methylene chloride	18.460	2.0	20.00	0	92.3	63	137				
MTBE	18.780	1.0	20.00	0	93.9	65	123				
n-Butylbenzene	23.370	1.0	20.00	0	117	69	137				
n-Propylbenzene	21.210	1.0	20.00	0	106	72	129				
Naphthalene	20.360	1.0	20.00	0	102	54	138				
o-Xylene	21.470	1.0	20.00	0	107	80	121				
sec-Butylbenzene	22.230	1.0	20.00	0	111	72	127				
Styrene	22.500	1.0	20.00	0	112	65	134				
Tert-amyl methyl ether	20.140	1.0	20.00	0	101	70	130				

Qualifiers:

- | | | |
|--|--|--|
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| 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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CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161022LCS		SampType: LCS		TestCode: 8260_WP_SF Units: ug/L			Prep Date:			RunNo: 111246		
Client ID: LCSW		Batch ID: CA16VW021		TestNo: EPA 8260B			Analysis Date: 10/22/2016			SeqNo: 2456449		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Tert-Butanol	83.750	5.0	100.0	0	83.8	70	130					
tert-Butylbenzene	22.300	1.0	20.00	0	112	70	129					
Tetrachloroethene	23.620	1.0	20.00	0	118	66	128					
Toluene	22.440	2.0	20.00	0	112	77	122					
trans-1,2-Dichloroethene	19.250	1.0	20.00	0	96.2	63	137					
trans-1,3-Dichloropropene	22.900	1.0	20.00	0	114	59	135					
Trichloroethene	23.450	1.0	20.00	0	117	70	127					
Trichlorofluoromethane	22.690	1.0	20.00	0	113	57	129					
Vinyl chloride	17.990	0.50	20.00	0	90.0	50	134					
Xylenes, Total	66.700	2.0	60.00	0	111	75	125					
Surr: 1,2-Dichloroethane-d4	22.300		25.00		89.2	72	119					
Surr: 4-Bromofluorobenzene	25.040		25.00		100	76	119					
Surr: Dibromofluoromethane	24.330		25.00		97.3	85	115					
Surr: Toluene-d8	24.820		25.00		99.3	81	120					

Sample ID: CA161022LCS		SampType: LCS		TestCode: 8260_WP_SF Units: ug/L			Prep Date:			RunNo: 111246		
Client ID: LCSS02		Batch ID: CA16VW021		TestNo: EPA 8260B			Analysis Date: 10/22/2016			SeqNo: 2456450		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1,1,2-Tetrachloroethane	24.740	1.0	20.00	0	124	81	129	24.88	0.564	20		
1,1,1-Trichloroethane	21.720	1.0	20.00	0	109	67	132	21.38	1.58	20		
1,1,2,2-Tetrachloroethane	20.390	1.0	20.00	0	102	63	128	20.93	2.61	20		
1,1,2-Trichloroethane	21.170	1.0	20.00	0	106	75	125	20.79	1.81	20		
1,1-Dichloroethane	20.670	0.50	20.00	0	103	69	133	18.23	12.5	20		
1,1-Dichloroethene	19.450	1.0	20.00	0	97.3	68	130	19.91	2.34	20		
1,1-Dichloropropene	20.880	1.0	20.00	0	104	73	132	21.25	1.76	20		
1,2,3-Trichlorobenzene	24.230	1.0	20.00	0	121	67	137	24.46	0.945	20		
1,2,3-Trichloropropane	19.390	1.0	20.00	0	97.0	73	124	19.94	2.80	20		
1,2,4-Trichlorobenzene	23.120	1.0	20.00	0	116	66	134	23.47	1.50	20		
1,2,4-Trimethylbenzene	21.300	1.0	20.00	0	106	74	132	22.14	3.87	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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 ELAP Cert 2676 | NV Cert NVO0922
 ORELAP/NELAP Cert 4046

CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161022LCSD		SampType: LCSD		TestCode: 8260_WP_SF Units: ug/L			Prep Date:			RunNo: 111246		
Client ID: LCSS02		Batch ID: CA16VW021		TestNo: EPA 8260B			Analysis Date: 10/22/2016			SeqNo: 2456450		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,2-Dibromo-3-chloropropane	22.820	2.0	20.00	0	114	50	132	22.08	3.30	20		
1,2-Dibromoethane	23.020	1.0	20.00	0	115	80	121	22.77	1.09	20		
1,2-Dichlorobenzene	22.770	1.0	20.00	0	114	71	122	23.31	2.34	20		
1,2-Dichloroethane	21.010	0.50	20.00	0	105	69	132	20.44	2.75	20		
1,2-Dichloropropane	19.540	1.0	20.00	0	97.7	75	125	19.89	1.78	20		
1,3,5-Trimethylbenzene	21.510	1.0	20.00	0	108	74	131	22.51	4.54	20		
1,3-Dichlorobenzene	22.750	1.0	20.00	0	114	75	124	23.17	1.83	20		
1,3-Dichloropropane	20.410	1.0	20.00	0	102	73	126	20.87	2.23	20		
1,4-Dichlorobenzene	22.240	1.0	20.00	0	111	74	123	22.48	1.07	20		
2,2-Dichloropropane	20.330	1.0	20.00	0	102	69	137	20.75	2.04	20		
2-Butanone	200.890	10	200.0	0	100	49	136	222.7	10.3	20		
2-Chlorotoluene	20.620	1.0	20.00	0	103	73	126	21.06	2.11	20		
4-Chlorotoluene	20.540	1.0	20.00	0	103	74	128	21.28	3.54	20		
4-Isopropyltoluene	21.460	1.0	20.00	0	107	73	130	22.42	4.38	20		
4-Methyl-2-pentanone	188.920	10	200.0	0	94.5	58	134	192.2	1.75	20		
Acetone	196.120	10	200.0	0	98.1	40	135	218.9	11.0	20		
Benzene	20.300	1.0	20.00	0	102	81	122	20.68	1.85	20		
Bromobenzene	23.030	1.0	20.00	0	115	76	124	23.47	1.89	20		
Bromochloromethane	22.200	1.0	20.00	0	111	65	129	22.63	1.92	20		
Bromodichloromethane	22.840	1.0	20.00	0	114	76	121	22.85	0.0438	20		
Bromoform	24.530	1.0	20.00	0	123	69	128	24.25	1.15	20		
Bromomethane	20.060	1.0	20.00	0	100	53	141	20.55	2.41	20		
Carbon disulfide	21.120	1.0	20.00	0	106	75	125	21.39	1.27	20		
Carbon tetrachloride	24.880	0.50	20.00	0	124	66	138	25.30	1.67	20		
Chlorobenzene	22.250	1.0	20.00	0	111	81	122	22.66	1.83	20		
Chloroethane	19.970	1.0	20.00	0	99.8	58	133	20.11	0.699	20		
Chloroform	20.150	1.0	20.00	0	101	69	128	20.31	0.791	20		
Chloromethane	16.040	1.0	20.00	0	80.2	56	131	16.15	0.683	20		
cis-1,2-Dichloroethene	20.350	1.0	20.00	0	102	72	126	20.30	0.246	20		
cis-1,3-Dichloropropene	21.820	1.0	20.00	0	109	69	131	22.07	1.14	20		

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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CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161022LCSD	SampType: LCSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111246						
Client ID: LCSS02	Batch ID: CA16VW021	TestNo: EPA 8260B		Analysis Date: 10/22/2016	SeqNo: 2456450						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Di-isopropyl ether	16.910	1.0	20.00	0	84.6	70	130	17.32	2.40	20	
Dibromochloromethane	25.980	1.0	20.00	0	130	66	133	26.19	0.805	20	
Dibromomethane	21.950	1.0	20.00	0	110	76	125	21.95	0	20	
Dichlorodifluoromethane	20.990	1.0	20.00	0	105	53	153	21.76	3.60	20	
Ethyl tert-butyl ether	18.570	1.0	20.00	0	92.8	70	130	18.90	1.76	20	
Ethylbenzene	20.120	1.0	20.00	0	101	73	127	20.49	1.82	20	
Freon-113	20.560	1.0	20.00	0	103	75	125	21.22	3.16	20	
Hexachlorobutadiene	23.760	1.0	20.00	0	119	67	131	24.46	2.90	20	
Isopropylbenzene	21.290	1.0	20.00	0	106	75	127	21.87	2.69	20	
m,p-Xylene	44.300	1.0	40.00	0	111	76	128	45.23	2.08	20	
Methylene chloride	18.300	2.0	20.00	0	91.5	63	137	18.46	0.871	20	
MTBE	18.860	1.0	20.00	0	94.3	65	123	18.78	0.425	20	
n-Butylbenzene	22.330	1.0	20.00	0	112	69	137	23.37	4.55	20	
n-Propylbenzene	20.610	1.0	20.00	0	103	72	129	21.21	2.87	20	
Naphthalene	20.270	1.0	20.00	0	101	54	138	20.36	0.443	20	
o-Xylene	21.290	1.0	20.00	0	106	80	121	21.47	0.842	20	
sec-Butylbenzene	21.250	1.0	20.00	0	106	72	127	22.23	4.51	20	
Styrene	22.490	1.0	20.00	0	112	65	134	22.50	0.0445	20	
Tert-amyl methyl ether	20.240	1.0	20.00	0	101	70	130	20.14	0.495	20	
Tert-Butanol	84.420	5.0	100.0	0	84.4	70	130	83.75	0.797	20	
tert-Butylbenzene	21.270	1.0	20.00	0	106	70	129	22.30	4.73	20	
Tetrachloroethene	23.130	1.0	20.00	0	116	66	128	23.62	2.10	20	
Toluene	22.030	2.0	20.00	0	110	77	122	22.44	1.84	20	
trans-1,2-Dichloroethene	18.820	1.0	20.00	0	94.1	63	137	19.25	2.26	20	
trans-1,3-Dichloropropene	23.030	1.0	20.00	0	115	59	135	22.90	0.566	20	
Trichloroethene	23.230	1.0	20.00	0	116	70	127	23.45	0.943	20	
Trichlorofluoromethane	22.390	1.0	20.00	0	112	57	129	22.69	1.33	20	
Vinyl chloride	17.510	0.50	20.00	0	87.6	50	134	17.99	2.70	20	
Xylenes, Total	65.590	2.0	60.00	0	109	75	125	66.70	1.68	20	
Surr: 1,2-Dichloroethane-d4	22.590		25.00		90.4	72	119		0		

Qualifiers:

- | | | |
|--|--|--|
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"Servino Clients with Passion and Professionalism"

CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161022LCSD	SampType: LCSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111246						
Client ID: LCSS02	Batch ID: CA16VW021	TestNo: EPA 8260B	Analysis Date: 10/22/2016	SeqNo: 2456450							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	25.240		25.00		101	76	119		0		
Surr: Dibromofluoromethane	24.840		25.00		99.4	85	115		0		
Surr: Toluene-d8	24.900		25.00		99.6	81	120		0		

Sample ID: CA161022MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111246						
Client ID: PBW	Batch ID: CA16VW021	TestNo: EPA 8260B	Analysis Date: 10/22/2016	SeqNo: 2456453							
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	0.020	1.0									J
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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CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161022MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111246						
Client ID: PBW	Batch ID: CA16VW021	TestNo: EPA 8260B		Analysis Date: 10/22/2016	SeqNo: 2456453						
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	1.170	10									J
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	0.080	1.0									J
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:

- | | | |
|--|--|--|
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CLIENT: CH2MHill
Work Order: N021360
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161022MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111246						
Client ID: PBW	Batch ID: CA16VW021	TestNo: EPA 8260B		Analysis Date: 10/22/2016	SeqNo: 2456453						
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	0.060	1.0									J
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	22.970		25.00		91.9	72	119				
Surr: 4-Bromofluorobenzene	23.090		25.00		92.4	76	119				
Surr: Dibromofluoromethane	24.390		25.00		97.6	85	115				
Surr: Toluene-d8	24.050		25.00		96.2	81	120				

Qualifiers:

- | | | |
|--|--|--|
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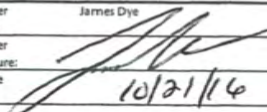
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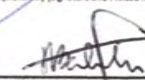

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 3151 W. Post Road
 Las Vegas, NV 89118
 Tel: 702-307-2659 Fax: 702-307-2691
 Marlon Cartin (marlon@atl-labs.com)

CHAIN OF CUSTODY RECORD

DATE: 10/21/16
 PAGE: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Section D Sampler Information:	
Company: Kinder Morgan Energy Partners Attention: Steve Defibaugh		Report To: Dan Jablonski		Attention: Steve Defibaugh - Ref. AFE# 81195		Sampler Name: James Dye	
Address: 1100 Town & Country Road Orange, CA 92868		Copy To: Steve Defibaugh		Company Name: Kinder Morgan Energy Partners		Sampler Signature: 	
Email To: steve_defibaugh@kindermorgan.com daniel.jablonski@ch2m.com		Purchase Order No.:		Address: 1100 Town & Country Road Orange, CA 92868		Sample Date: 10/21/16	
Phone: 714-560-4802 Fax: 714-560-4801		Project Name: SFPP Norwalk		ATL Project Manager: Marlon Cartin			

Section E Required Sample Information												
ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G-GIRAB C-COMP)	SAMPLING		TOTAL # OF CONTAINERS	SAMPLE TEMPERATURE (°F)	Analysis Test	CONTAINER TYPE		Comments
					DATE	TIME				# OF CONTAINERS	VOLUME (mL)	
1	INF-10-21	INFLUENT	WW	G	10/21/16	1330	8		X	X		
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

Relinquished by (Signature and Printed Name): 	Date / Time: 10/21/16 17:00	Turn Around Time (TAT): <input type="checkbox"/> A = Same Day <input type="checkbox"/> B = 24 Hours <input type="checkbox"/> C = 48 Hours <input type="checkbox"/> D = 72 Hours <input checked="" type="checkbox"/> E = 5 Workdays <input type="checkbox"/> F = 10 Workdays TAT Starts at 8 AM the following day if samples received after 3:00 PM.	Special Instruction:
Relinquished by (Signature and Printed Name): 	Date / Time: 10/21/16 5:45 PM		
Relinquished by (Signature and Printed Name): 	Date / Time: 10/21/16 5:45 PM		

Matrix:			Preservatives:			Container Type:		
W = Water	WW = Wastewater		H = HCl	N = HNO3	S = H2SO4	T = Tube	V = VOA	P = Pint
O = Oil	P = Product	S = Soil	Z = Zn(AC)2	O = NaOH	T = Na2S2O3	A = Amber Glass	B = Tedlar	J = Jar
Others/Specify:			Others/Specify:			M = Metal P = Plastic C = Can		

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: 10/21/16 Workorder: N021360
 Rep sample Temp (Deg C): Received on ice IR Gun ID: IRCA1
 Temp Blank: Yes No
 Carrier name: Asset
 Last 4 digits of Tracking No.: N/A Packing Material Used: none
 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 checked="" 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 type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" 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 type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" 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:

upon pick up of samples, client was not present and COC was not relinquished.

Checklist Completed By: Murphy A.

Reviewed By: [Signature] 10/27/2016

ASSET Laboratories

WORK ORDER Summary

24-Oct-16

WorkOrder: N021360

Client ID: CH2HI03

Project: SFPP - Norwalk Site

QC Level: RTNE

Date Received: 10/21/2016

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
N021360-001A	INF-10-21	10/21/2016 1:30:00 PM	10/28/2016	Wastewater	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
			10/28/2016		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
N021360-001B			10/28/2016		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			10/28/2016		EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			10/28/2016		EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N021360-002A	FOLDER		10/28/2016		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB

November 15, 2016

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

TEL:

FAX:

Workorder No.: N021533

RE: SFPP - Norwalk Site


Attention: Dan Jablonski

Enclosed are the results for sample(s) received on November 08, 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,

 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
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CLIENT: CH2MHill
Project: SFPP - Norwalk Site
Lab Order: N021533

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 8260B:

Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate(LCSD) recovery biased high for Chloroethane in batch CA16VW026. Sample results were non-detect (ND) for these analytes therefore reanalysis of the samples was not necessary.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N021534-001G-MS and N021534-001G-MSD possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate(LCSD) recovery biased high for Acetone in batch CA16VW027. Sample results were non-detect (ND) for these analytes therefore reanalysis of the samples was not necessary.



CLIENT: CH2MHill
Project: SFPP - Norwalk Site
Lab Order: N021533
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N021533-001A	INF-11-08	Wastewater	11/8/2016 1:40:00 PM	11/8/2016	11/15/2016
N021533-001B	INF-11-08	Wastewater	11/8/2016 1:40:00 PM	11/8/2016	11/15/2016
N021533-001C	INF-11-08	Wastewater	11/8/2016 1:40:00 PM	11/8/2016	11/15/2016



ANALYTICAL RESULTS

Print Date: 15-Nov-16

ASSET Laboratories

CLIENT: CH2MHill
Lab Order: N021533
Project: SFPP - Norwalk Site
Lab ID: N021533-001

Client Sample ID: INF-11-08
Collection Date: 11/8/2016 1:40:00 PM
Matrix: WASTEWATER

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

EPA 8260B

RunID:	CA01638-MS08_161108B	QC Batch:	CA16VW026	PrepDate:	Analyst:	RB
1,1,1,2-Tetrachloroethane	ND	0.066	1.0	ug/L	1	11/9/2016 11:58 AM
1,1,1-Trichloroethane	ND	0.068	1.0	ug/L	1	11/9/2016 11:58 AM
1,1,2,2-Tetrachloroethane	ND	0.031	1.0	ug/L	1	11/9/2016 11:58 AM
1,1,2-Trichloroethane	ND	0.062	1.0	ug/L	1	11/9/2016 11:58 AM
1,1-Dichloroethane	ND	0.022	0.50	ug/L	1	11/9/2016 11:58 AM
1,1-Dichloroethene	ND	0.087	1.0	ug/L	1	11/9/2016 11:58 AM
1,1-Dichloropropene	ND	0.044	1.0	ug/L	1	11/9/2016 11:58 AM
1,2,3-Trichlorobenzene	ND	0.056	1.0	ug/L	1	11/9/2016 11:58 AM
1,2,3-Trichloropropane	ND	0.059	1.0	ug/L	1	11/9/2016 11:58 AM
1,2,4-Trichlorobenzene	ND	0.060	1.0	ug/L	1	11/9/2016 11:58 AM
1,2,4-Trimethylbenzene	58	0.042	1.0	ug/L	1	11/9/2016 11:58 AM
1,2-Dibromo-3-chloropropane	ND	0.047	2.0	ug/L	1	11/9/2016 11:58 AM
1,2-Dibromoethane	ND	0.057	1.0	ug/L	1	11/9/2016 11:58 AM
1,2-Dichlorobenzene	ND	0.040	1.0	ug/L	1	11/9/2016 11:58 AM
1,2-Dichloroethane	ND	0.064	0.50	ug/L	1	11/9/2016 11:58 AM
1,2-Dichloropropane	ND	0.062	1.0	ug/L	1	11/9/2016 11:58 AM
1,3,5-Trimethylbenzene	34	0.015	1.0	ug/L	1	11/9/2016 11:58 AM
1,3-Dichlorobenzene	ND	0.057	1.0	ug/L	1	11/9/2016 11:58 AM
1,3-Dichloropropane	ND	0.040	1.0	ug/L	1	11/9/2016 11:58 AM
1,4-Dichlorobenzene	ND	0.030	1.0	ug/L	1	11/9/2016 11:58 AM
2,2-Dichloropropane	ND	0.026	1.0	ug/L	1	11/9/2016 11:58 AM
2-Butanone	ND	0.48	10	ug/L	1	11/9/2016 11:58 AM
2-Chlorotoluene	ND	0.040	1.0	ug/L	1	11/9/2016 11:58 AM
4-Chlorotoluene	ND	0.036	1.0	ug/L	1	11/9/2016 11:58 AM
4-Isopropyltoluene	1.3	0.022	1.0	ug/L	1	11/9/2016 11:58 AM
4-Methyl-2-pentanone	ND	0.17	10	ug/L	1	11/9/2016 11:58 AM
Acetone	6.6	1.1	10	J ug/L	1	11/14/2016 05:24 PM
Acrolein	ND	0.56	5.0	ug/L	1	11/9/2016 11:58 AM
Acrylonitrile	ND	0.30	2.0	ug/L	1	11/9/2016 11:58 AM
Benzene	2.5	0.036	1.0	ug/L	1	11/9/2016 11:58 AM
Bromobenzene	ND	0.043	1.0	ug/L	1	11/9/2016 11:58 AM
Bromochloromethane	ND	0.22	1.0	ug/L	1	11/9/2016 11:58 AM
Bromodichloromethane	ND	0.031	1.0	ug/L	1	11/9/2016 11:58 AM
Bromoform	ND	0.32	1.0	ug/L	1	11/9/2016 11:58 AM
Bromomethane	ND	0.32	1.0	ug/L	1	11/9/2016 11:58 AM
Carbon disulfide	ND	0.025	1.0	ug/L	1	11/9/2016 11:58 AM

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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ANALYTICAL RESULTS

Print Date: 15-Nov-16

CLIENT: CH2MHill
Lab Order: N021533
Project: SFPP - Norwalk Site
Lab ID: N021533-001

Client Sample ID: INF-11-08
Collection Date: 11/8/2016 1:40:00 PM
Matrix: WASTEWATER

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

EPA 8260B

RunID:	CA01638-MS08_161108B	QC Batch:	CA16VW026	PrepDate:	Analyst:	RB
Carbon tetrachloride	ND	0.057	0.50	ug/L	1	11/9/2016 11:58 AM
Chlorobenzene	ND	0.036	1.0	ug/L	1	11/9/2016 11:58 AM
Chloroethane	ND	0.099	1.0	ug/L	1	11/9/2016 11:58 AM
Chloroform	ND	0.036	1.0	ug/L	1	11/9/2016 11:58 AM
Chloromethane	ND	0.12	1.0	ug/L	1	11/9/2016 11:58 AM
cis-1,2-Dichloroethene	ND	0.051	1.0	ug/L	1	11/9/2016 11:58 AM
cis-1,3-Dichloropropene	ND	0.044	1.0	ug/L	1	11/9/2016 11:58 AM
Di-isopropyl ether	9.1	0.017	1.0	ug/L	1	11/9/2016 11:58 AM
Dibromochloromethane	ND	0.072	1.0	ug/L	1	11/9/2016 11:58 AM
Dibromomethane	ND	0.17	1.0	ug/L	1	11/9/2016 11:58 AM
Dichlorodifluoromethane	ND	0.070	1.0	ug/L	1	11/9/2016 11:58 AM
Ethyl tert-butyl ether	ND	0.039	1.0	ug/L	1	11/9/2016 11:58 AM
Ethylbenzene	ND	0.036	1.0	ug/L	1	11/9/2016 11:58 AM
Freon-113	ND	0.074	1.0	ug/L	1	11/9/2016 11:58 AM
Hexachlorobutadiene	ND	0.11	1.0	ug/L	1	11/9/2016 11:58 AM
Isopropylbenzene	0.42	0.034	1.0	J ug/L	1	11/9/2016 11:58 AM
m,p-Xylene	100	0.024	1.0	ug/L	1	11/9/2016 11:58 AM
Methylene chloride	ND	0.28	2.0	ug/L	1	11/9/2016 11:58 AM
MTBE	2.4	0.062	1.0	ug/L	1	11/9/2016 11:58 AM
n-Butylbenzene	1.3	0.031	1.0	ug/L	1	11/9/2016 11:58 AM
n-Propylbenzene	0.32	0.018	1.0	J ug/L	1	11/9/2016 11:58 AM
Naphthalene	7.7	0.048	1.0	ug/L	1	11/9/2016 11:58 AM
o-Xylene	59	0.042	1.0	ug/L	1	11/9/2016 11:58 AM
sec-Butylbenzene	0.93	0.025	1.0	J ug/L	1	11/9/2016 11:58 AM
Styrene	ND	0.035	1.0	ug/L	1	11/9/2016 11:58 AM
Tert-amyl methyl ether	ND	0.039	1.0	ug/L	1	11/9/2016 11:58 AM
Tert-Butanol	66	0.30	5.0	ug/L	1	11/9/2016 11:58 AM
tert-Butylbenzene	ND	0.030	1.0	ug/L	1	11/9/2016 11:58 AM
Tetrachloroethene	ND	0.16	1.0	ug/L	1	11/9/2016 11:58 AM
Toluene	2.6	0.042	2.0	ug/L	1	11/9/2016 11:58 AM
trans-1,2-Dichloroethene	ND	0.070	1.0	ug/L	1	11/9/2016 11:58 AM
trans-1,3-Dichloropropene	ND	0.039	1.0	ug/L	1	11/9/2016 11:58 AM
Trichloroethene	ND	0.12	1.0	ug/L	1	11/9/2016 11:58 AM
Trichlorofluoromethane	ND	0.031	1.0	ug/L	1	11/9/2016 11:58 AM
Vinyl chloride	ND	0.095	0.50	ug/L	1	11/9/2016 11:58 AM
Xylenes, Total	160	1.5	2.0	ug/L	1	11/9/2016 11:58 AM

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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ANALYTICAL RESULTS

Print Date: 15-Nov-16

CLIENT: CH2MHill
Lab Order: N021533
Project: SFPP - Norwalk Site
Lab ID: N021533-001

Client Sample ID: INF-11-08
Collection Date: 11/8/2016 1:40:00 PM
Matrix: WASTEWATER

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

EPA 8260B

RunID:	CA01638-MS08_161108B	QC Batch:	CA16VW026	PrepDate:	Analyst:	RB
Surr: 1,2-Dichloroethane-d4	96.2	0	72-119	%REC	1	11/14/2016 05:24 PM
Surr: 1,2-Dichloroethane-d4	91.8	0	72-119	%REC	1	11/9/2016 11:58 AM
Surr: 4-Bromofluorobenzene	104	0	76-119	%REC	1	11/14/2016 05:24 PM
Surr: 4-Bromofluorobenzene	106	0	76-119	%REC	1	11/9/2016 11:58 AM
Surr: Dibromofluoromethane	98.2	0	85-115	%REC	1	11/14/2016 05:24 PM
Surr: Dibromofluoromethane	94.0	0	85-115	%REC	1	11/9/2016 11:58 AM
Surr: Toluene-d8	102	0	81-120	%REC	1	11/14/2016 05:24 PM
Surr: Toluene-d8	102	0	81-120	%REC	1	11/9/2016 11:58 AM

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

RunID:	NV00922-GC3_161114C	QC Batch:	60266	PrepDate:	11/14/2016	Analyst:	FJ
TPH-Diesel (C13-C22)	1500	15	25	ug/L	1	11/15/2016 08:44 AM	
TPH-Oil (C23-C36)	130	14	25	ug/L	1	11/15/2016 08:44 AM	
Surr: Octacosane	93.4	0	26-152	%REC	1	11/15/2016 08:44 AM	
Surr: p-Terphenyl	101	0	57-132	%REC	1	11/15/2016 08:44 AM	

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

RunID:	NV00922-GC4_161110A	QC Batch:	E16VW074	PrepDate:	Analyst:	QBM
TPH-Gasoline (C4-C12)	1100	16	50	ug/L	1	11/10/2016 02:47 PM
Surr: Chlorobenzene - d5	103	0	74-138	%REC	1	11/10/2016 02:47 PM

TOTAL TPH

EPA 8015B

RunID:	NV00922-GC3_161114C	QC Batch:	R111688	PrepDate:	Analyst:	FJ
Total TPH	2800	16	50	ug/L	1	11/15/2016

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 interference
	Results are wet unless otherwise specified	DO Surrogate Diluted Out



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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: MB-60266	SampType: MBLK	TestCode: 8015_W_FP_	Units: ug/L	Prep Date: 11/14/2016	RunNo: 111688						
Client ID: PBW	Batch ID: 60266	TestNo: EPA 8015B EPA 3510C		Analysis Date: 11/15/2016	SeqNo: 2478147						
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)	23.035	25									J
Surr: Octacosane	64.235		80.00		80.3	26	152				
Surr: p-Terphenyl	68.134		80.00		85.2	57	132				

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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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: MB-R111688	SampType: MBLK	TestCode: 8015_W_SFP Units: ug/L	Prep Date:	RunNo: 111688							
Client ID: PBW	Batch ID: R111688	TestNo: EPA 8015B	Analysis Date: 11/15/2016	SeqNo: 2478285							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	23.035	50									J

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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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFP

Sample ID: E161110LCS	SampType: LCS	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111609							
Client ID: LCSW	Batch ID: E16VW074	TestNo: EPA 8015B	Analysis Date: 11/10/2016	SeqNo: 2474430							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	922.000	50	1000	0	92.2	67	136				
Surr: Chlorobenzene - d5	49066.000		50000		98.1	74	138				

Sample ID: E161110MB1	SampType: MBLK	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111609							
Client ID: PBW	Batch ID: E16VW074	TestNo: EPA 8015B	Analysis Date: 11/10/2016	SeqNo: 2474431							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	ND	50									
Surr: Chlorobenzene - d5	54011.000		50000		108	74	138				

Sample ID: N021534-001BDUP	SampType: DUP	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111609							
Client ID: ZZZZZ	Batch ID: E16VW074	TestNo: EPA 8015B	Analysis Date: 11/10/2016	SeqNo: 2474433							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	ND	50						0	0	0	
Surr: Chlorobenzene - d5	56976.000		50000		114	74	138		0	0	

Sample ID: N021534-001BMS	SampType: MS	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111609							
Client ID: ZZZZZ	Batch ID: E16VW074	TestNo: EPA 8015B	Analysis Date: 11/10/2016	SeqNo: 2474435							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1134.000	50	1000	0	113	67	136				
Surr: Chlorobenzene - d5	53060.000		50000		106	74	138				

Sample ID: N021534-001BMSD	SampType: MSD	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111609							
Client ID: ZZZZZ	Batch ID: E16VW074	TestNo: EPA 8015B	Analysis Date: 11/10/2016	SeqNo: 2474500							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	935.000	50	1000	0	93.5	67	136	1134	19.2	30	

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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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Sample ID: N021534-001BMSD	SampType: MSD	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 111609							
Client ID: ZZZZZZ	Batch ID: E16VW074	TestNo: EPA 8015B	Analysis Date: 11/10/2016	SeqNo: 2474500							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Chlorobenzene - d5	49908.000		50000		99.8	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 |



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ANALYTICAL SERVICES FOR THE ENVIRONMENTAL SCIENCE INDUSTRY

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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA1611108LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111582						
Client ID: LCSW	Batch ID: CA16VW026	TestNo: EPA 8260B		Analysis Date: 11/9/2016	SeqNo: 2473035						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.260	1.0	20.00	0	101	81	129				
1,1,1-Trichloroethane	19.770	1.0	20.00	0	98.8	67	132				
1,1,2,2-Tetrachloroethane	20.070	1.0	20.00	0	100	63	128				
1,1,2-Trichloroethane	19.070	1.0	20.00	0	95.4	75	125				
1,1-Dichloroethane	19.350	0.50	20.00	0	96.8	69	133				
1,1-Dichloroethene	19.060	1.0	20.00	0	95.3	68	130				
1,1-Dichloropropene	20.070	1.0	20.00	0	100	73	132				
1,2,3-Trichlorobenzene	19.490	1.0	20.00	0	97.5	67	137				
1,2,3-Trichloropropane	19.810	1.0	20.00	0	99.0	73	124				
1,2,4-Trichlorobenzene	18.850	1.0	20.00	0	94.3	66	134				
1,2,4-Trimethylbenzene	22.140	1.0	20.00	0	111	74	132				
1,2-Dibromo-3-chloropropane	19.120	2.0	20.00	0	95.6	50	132				
1,2-Dibromoethane	20.070	1.0	20.00	0	100	80	121				
1,2-Dichlorobenzene	21.660	1.0	20.00	0	108	71	122				
1,2-Dichloroethane	18.680	0.50	20.00	0	93.4	69	132				
1,2-Dichloropropane	20.190	1.0	20.00	0	101	75	125				
1,3,5-Trimethylbenzene	21.980	1.0	20.00	0	110	74	131				
1,3-Dichlorobenzene	20.690	1.0	20.00	0	103	75	124				
1,3-Dichloropropane	20.870	1.0	20.00	0	104	73	126				
1,4-Dichlorobenzene	19.080	1.0	20.00	0	95.4	74	123				
2,2-Dichloropropane	18.300	1.0	20.00	0	91.5	69	137				
2-Butanone	179.090	10	200.0	0	89.5	49	136				
2-Chlorotoluene	20.670	1.0	20.00	0	103	73	126				
4-Chlorotoluene	22.120	1.0	20.00	0	111	74	128				
4-Isopropyltoluene	22.470	1.0	20.00	0	112	73	130				
4-Methyl-2-pentanone	220.830	10	200.0	0	110	58	134				
Acrolein	186.690	5.0	200.0	0	93.3	75	125				
Acrylonitrile	197.980	2.0	200.0	0	99.0	75	125				
Benzene	20.120	1.0	20.00	0	101	81	122				
Bromobenzene	20.380	1.0	20.00	0	102	76	124				

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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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA1611108LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111582						
Client ID: LCSW	Batch ID: CA16VW026	TestNo: EPA 8260B		Analysis Date: 11/9/2016	SeqNo: 2473035						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromochloromethane	20.560	1.0	20.00	0	103	65	129				
Bromodichloromethane	19.290	1.0	20.00	0	96.5	76	121				
Bromoform	20.260	1.0	20.00	0	101	69	128				
Bromomethane	21.830	1.0	20.00	0	109	53	141				
Carbon disulfide	19.240	1.0	20.00	0	96.2	75	125				
Carbon tetrachloride	19.640	0.50	20.00	0	98.2	66	138				
Chlorobenzene	20.320	1.0	20.00	0	102	81	122				
Chloroethane	28.580	1.0	20.00	0	143	58	133				S
Chloroform	19.700	1.0	20.00	0	98.5	69	128				
Chloromethane	23.700	1.0	20.00	0	118	56	131				
cis-1,2-Dichloroethene	19.360	1.0	20.00	0	96.8	72	126				
cis-1,3-Dichloropropene	21.480	1.0	20.00	0	107	69	131				
Di-isopropyl ether	19.990	1.0	20.00	0	100	70	130				
Dibromochloromethane	20.520	1.0	20.00	0	103	66	133				
Dibromomethane	19.680	1.0	20.00	0	98.4	76	125				
Dichlorodifluoromethane	23.730	1.0	20.00	0	119	53	153				
Ethyl tert-butyl ether	21.590	1.0	20.00	0	108	70	130				
Ethylbenzene	20.060	1.0	20.00	0	100	73	127				
Freon-113	16.700	1.0	20.00	0	83.5	75	125				
Hexachlorobutadiene	19.340	1.0	20.00	0	96.7	67	131				
Isopropylbenzene	21.270	1.0	20.00	0	106	75	127				
m,p-Xylene	43.030	1.0	40.00	0	108	76	128				
Methylene chloride	19.190	2.0	20.00	0	96.0	63	137				
MTBE	19.680	1.0	20.00	0	98.4	65	123				
n-Butylbenzene	20.350	1.0	20.00	0	102	69	137				
n-Propylbenzene	21.150	1.0	20.00	0	106	72	129				
Naphthalene	18.330	1.0	20.00	0	91.7	54	138				
o-Xylene	20.810	1.0	20.00	0	104	80	121				
sec-Butylbenzene	21.370	1.0	20.00	0	107	72	127				
Styrene	18.760	1.0	20.00	0	93.8	65	134				

Qualifiers:

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CLIENT: CH2MHill
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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA1611108LCS		SampType: LCS		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 111582	
Client ID: LCSW		Batch ID: CA16VW026		TestNo: EPA 8260B		Analysis Date: 11/9/2016				SeqNo: 2473035	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tert-amyl methyl ether	20.990	1.0	20.00	0	105	70	130				
Tert-Butanol	99.820	5.0	100.0	0	99.8	70	130				
tert-Butylbenzene	21.800	1.0	20.00	0	109	70	129				
Tetrachloroethene	20.670	1.0	20.00	0	103	66	128				
Toluene	19.550	2.0	20.00	0	97.8	77	122				
trans-1,2-Dichloroethene	18.590	1.0	20.00	0	93.0	63	137				
trans-1,3-Dichloropropene	20.100	1.0	20.00	0	101	59	135				
Trichloroethene	19.790	1.0	20.00	0	99.0	70	127				
Trichlorofluoromethane	22.310	1.0	20.00	0	112	57	129				
Vinyl chloride	22.770	0.50	20.00	0	114	50	134				
Xylenes, Total	63.840	2.0	60.00	0	106	75	125				
Surr: 1,2-Dichloroethane-d4	23.540		25.00		94.2	72	119				
Surr: 4-Bromofluorobenzene	26.790		25.00		107	76	119				
Surr: Dibromofluoromethane	24.290		25.00		97.2	85	115				
Surr: Toluene-d8	25.070		25.00		100	81	120				

Sample ID: CA161108LCS		SampType: LCS		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 111582	
Client ID: LCSS02		Batch ID: CA16VW026		TestNo: EPA 8260B		Analysis Date: 11/9/2016				SeqNo: 2473036	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.550	1.0	20.00	0	103	81	129	20.26	1.42	20	
1,1,1-Trichloroethane	19.420	1.0	20.00	0	97.1	67	132	19.77	1.79	20	
1,1,2,2-Tetrachloroethane	19.780	1.0	20.00	0	98.9	63	128	20.07	1.46	20	
1,1,2-Trichloroethane	18.900	1.0	20.00	0	94.5	75	125	19.07	0.895	20	
1,1-Dichloroethane	19.200	0.50	20.00	0	96.0	69	133	19.35	0.778	20	
1,1-Dichloroethene	18.980	1.0	20.00	0	94.9	68	130	19.06	0.421	20	
1,1-Dichloropropene	20.190	1.0	20.00	0	101	73	132	20.07	0.596	20	
1,2,3-Trichlorobenzene	19.140	1.0	20.00	0	95.7	67	137	19.49	1.81	20	
1,2,3-Trichloropropane	20.040	1.0	20.00	0	100	73	124	19.81	1.15	20	
1,2,4-Trichlorobenzene	18.660	1.0	20.00	0	93.3	66	134	18.85	1.01	20	

Qualifiers:

- | | | |
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CLIENT: CH2MHill
 Work Order: N021533
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161108LCSD		SampType: LCSD		TestCode: 8260_WP_SF Units: ug/L			Prep Date:			RunNo: 111582		
Client ID: LCSS02		Batch ID: CA16VW026		TestNo: EPA 8260B			Analysis Date: 11/9/2016			SeqNo: 2473036		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,2,4-Trimethylbenzene	22.400	1.0	20.00	0	112	74	132	22.14	1.17	20		
1,2-Dibromo-3-chloropropane	18.450	2.0	20.00	0	92.2	50	132	19.12	3.57	20		
1,2-Dibromoethane	20.190	1.0	20.00	0	101	80	121	20.07	0.596	20		
1,2-Dichlorobenzene	21.280	1.0	20.00	0	106	71	122	21.66	1.77	20		
1,2-Dichloroethane	18.970	0.50	20.00	0	94.8	69	132	18.68	1.54	20		
1,2-Dichloropropane	20.300	1.0	20.00	0	102	75	125	20.19	0.543	20		
1,3,5-Trimethylbenzene	22.240	1.0	20.00	0	111	74	131	21.98	1.18	20		
1,3-Dichlorobenzene	20.490	1.0	20.00	0	102	75	124	20.69	0.971	20		
1,3-Dichloropropane	21.260	1.0	20.00	0	106	73	126	20.87	1.85	20		
1,4-Dichlorobenzene	19.130	1.0	20.00	0	95.7	74	123	19.08	0.262	20		
2,2-Dichloropropane	17.990	1.0	20.00	0	90.0	69	137	18.30	1.71	20		
2-Butanone	190.730	10	200.0	0	95.4	49	136	179.1	6.29	20		
2-Chlorotoluene	20.650	1.0	20.00	0	103	73	126	20.67	0.0968	20		
4-Chlorotoluene	21.730	1.0	20.00	0	109	74	128	22.12	1.78	20		
4-Isopropyltoluene	22.420	1.0	20.00	0	112	73	130	22.47	0.223	20		
4-Methyl-2-pentanone	221.890	10	200.0	0	111	58	134	220.8	0.479	20		
Acrolein	179.250	5.0	200.0	0	89.6	75	125	186.7	4.07	20		
Acrylonitrile	195.900	2.0	200.0	0	98.0	75	125	198.0	1.06	20		
Benzene	20.130	1.0	20.00	0	101	81	122	20.12	0.0497	20		
Bromobenzene	20.200	1.0	20.00	0	101	76	124	20.38	0.887	20		
Bromochloromethane	19.900	1.0	20.00	0	99.5	65	129	20.56	3.26	20		
Bromodichloromethane	19.480	1.0	20.00	0	97.4	76	121	19.29	0.980	20		
Bromoform	20.370	1.0	20.00	0	102	69	128	20.26	0.541	20		
Bromomethane	22.060	1.0	20.00	0	110	53	141	21.83	1.05	20		
Carbon disulfide	18.870	1.0	20.00	0	94.4	75	125	19.24	1.94	20		
Carbon tetrachloride	19.710	0.50	20.00	0	98.6	66	138	19.64	0.356	20		
Chlorobenzene	20.400	1.0	20.00	0	102	81	122	20.32	0.393	20		
Chloroethane	28.120	1.0	20.00	0	141	58	133	28.58	1.62	20	S	
Chloroform	19.320	1.0	20.00	0	96.6	69	128	19.70	1.95	20		
Chloromethane	24.120	1.0	20.00	0	121	56	131	23.70	1.76	20		

Qualifiers:

- | | | |
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CLIENT: CH2MHill
 Work Order: N021533
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161108LCSD		SampType: LCSD		TestCode: 8260_WP_SF Units: ug/L			Prep Date:			RunNo: 111582		
Client ID: LCSS02		Batch ID: CA16VW026		TestNo: EPA 8260B			Analysis Date: 11/9/2016			SeqNo: 2473036		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
cis-1,2-Dichloroethene	18.740	1.0	20.00	0	93.7	72	126	19.36	3.25	20		
cis-1,3-Dichloropropene	21.580	1.0	20.00	0	108	69	131	21.48	0.464	20		
Di-isopropyl ether	20.200	1.0	20.00	0	101	70	130	19.99	1.05	20		
Dibromochloromethane	20.850	1.0	20.00	0	104	66	133	20.52	1.60	20		
Dibromomethane	19.630	1.0	20.00	0	98.2	76	125	19.68	0.254	20		
Dichlorodifluoromethane	23.840	1.0	20.00	0	119	53	153	23.73	0.462	20		
Ethyl tert-butyl ether	21.420	1.0	20.00	0	107	70	130	21.59	0.791	20		
Ethylbenzene	20.330	1.0	20.00	0	102	73	127	20.06	1.34	20		
Freon-113	16.590	1.0	20.00	0	83.0	75	125	16.70	0.661	20		
Hexachlorobutadiene	19.430	1.0	20.00	0	97.2	67	131	19.34	0.464	20		
Isopropylbenzene	21.280	1.0	20.00	0	106	75	127	21.27	0.0470	20		
m,p-Xylene	43.410	1.0	40.00	0	109	76	128	43.03	0.879	20		
Methylene chloride	18.810	2.0	20.00	0	94.1	63	137	19.19	2.00	20		
MTBE	19.710	1.0	20.00	0	98.6	65	123	19.68	0.152	20		
n-Butylbenzene	20.210	1.0	20.00	0	101	69	137	20.35	0.690	20		
n-Propylbenzene	21.210	1.0	20.00	0	106	72	129	21.15	0.283	20		
Naphthalene	18.350	1.0	20.00	0	91.8	54	138	18.33	0.109	20		
o-Xylene	21.310	1.0	20.00	0	107	80	121	20.81	2.37	20		
sec-Butylbenzene	21.270	1.0	20.00	0	106	72	127	21.37	0.469	20		
Styrene	19.280	1.0	20.00	0	96.4	65	134	18.76	2.73	20		
Tert-amyl methyl ether	21.270	1.0	20.00	0	106	70	130	20.99	1.33	20		
Tert-Butanol	100.540	5.0	100.0	0	101	70	130	99.82	0.719	20		
tert-Butylbenzene	21.810	1.0	20.00	0	109	70	129	21.80	0.0459	20		
Tetrachloroethene	20.210	1.0	20.00	0	101	66	128	20.67	2.25	20		
Toluene	19.540	2.0	20.00	0	97.7	77	122	19.55	0.0512	20		
trans-1,2-Dichloroethene	18.060	1.0	20.00	0	90.3	63	137	18.59	2.89	20		
trans-1,3-Dichloropropene	20.110	1.0	20.00	0	101	59	135	20.10	0.0497	20		
Trichloroethene	20.310	1.0	20.00	0	102	70	127	19.79	2.59	20		
Trichlorofluoromethane	21.810	1.0	20.00	0	109	57	129	22.31	2.27	20		
Vinyl chloride	23.040	0.50	20.00	0	115	50	134	22.77	1.18	20		

Qualifiers:

- | | | |
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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161108LCSD	SampType: LCSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111582						
Client ID: LCSS02	Batch ID: CA16VW026	TestNo: EPA 8260B	Analysis Date: 11/9/2016	SeqNo: 2473036							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	64.720	2.0	60.00	0	108	75	125	63.84	1.37	20	
Surr: 1,2-Dichloroethane-d4	23.680		25.00		94.7	72	119		0		
Surr: 4-Bromofluorobenzene	26.570		25.00		106	76	119		0		
Surr: Dibromofluoromethane	24.220		25.00		96.9	85	115		0		
Surr: Toluene-d8	25.480		25.00		102	81	120		0		

Sample ID: CA161108MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111582						
Client ID: PBW	Batch ID: CA16VW026	TestNo: EPA 8260B	Analysis Date: 11/9/2016	SeqNo: 2473039							
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									

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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 ELAP Cert 2676 | NV Cert NVO0922
 ORELAP/NELAP Cert 4046

CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161108MB3	SampType: MBLK	TestCode: 8260_WP_SF Units: ug/L	Prep Date:	RunNo: 111582							
Client ID: PBW	Batch ID: CA16VW026	TestNo: EPA 8260B	Analysis Date: 11/9/2016	SeqNo: 2473039							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	1.0									
2-Butanone	ND	10									
2-Chlorotoluene	ND	1.0									
4-Chlorotoluene	ND	1.0									
4-Isopropyltoluene	ND	1.0									
4-Methyl-2-pentanone	ND	10									
Acrolein	ND	5.0									
Acrylonitrile	ND	2.0									
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	0.040	1.0									J
Freon-113	ND	1.0									
Hexachlorobutadiene	ND	1.0									

Qualifiers:

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ASSET LABORATORIES
ANALYTICAL SERVICES FOR ENVIRONMENTAL MONITORING

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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161108MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111582						
Client ID: PBW	Batch ID: CA16VW026	TestNo: EPA 8260B		Analysis Date: 11/9/2016	SeqNo: 2473039						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	ND	1.0									
m,p-Xylene	0.050	1.0									J
Methylene chloride	ND	2.0									
MTBE	ND	1.0									
n-Butylbenzene	ND	1.0									
n-Propylbenzene	ND	1.0									
Naphthalene	ND	1.0									
o-Xylene	0.070	1.0									J
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	0.120	2.0									J
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	25.290		25.00		101	72	119				
Surr: 4-Bromofluorobenzene	23.820		25.00		95.3	76	119				
Surr: Dibromofluoromethane	25.510		25.00		102	85	115				
Surr: Toluene-d8	25.280		25.00		101	81	120				

Sample ID: N021534-001GMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111582						
Client ID: ZZZZZZ	Batch ID: CA16VW026	TestNo: EPA 8260B		Analysis Date: 11/9/2016	SeqNo: 2473050						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N021534-001GMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111582						
Client ID: ZZZZZZ	Batch ID: CA16VW026	TestNo: EPA 8260B		Analysis Date: 11/9/2016	SeqNo: 2473050						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	23.000	1.0	20.00	0	115	81	129				
1,1,1-Trichloroethane	23.240	1.0	20.00	0	116	67	132				
1,1,2,2-Tetrachloroethane	18.750	1.0	20.00	0	93.8	63	128				
1,1,2-Trichloroethane	18.280	1.0	20.00	0	91.4	75	125				
1,1-Dichloroethane	20.770	0.50	20.00	0	104	69	133				
1,1-Dichloroethene	22.510	1.0	20.00	0	113	68	130				
1,1-Dichloropropene	25.430	1.0	20.00	0	127	73	132				
1,2,3-Trichlorobenzene	20.490	1.0	20.00	0	102	67	137				
1,2,3-Trichloropropane	17.890	1.0	20.00	0	89.4	73	124				
1,2,4-Trichlorobenzene	21.660	1.0	20.00	0	108	66	134				
1,2,4-Trimethylbenzene	27.560	1.0	20.00	0	138	74	132				S
1,2-Dibromo-3-chloropropane	16.590	2.0	20.00	0	83.0	50	132				
1,2-Dibromoethane	18.870	1.0	20.00	0	94.4	80	121				
1,2-Dichlorobenzene	23.930	1.0	20.00	0	120	71	122				
1,2-Dichloroethane	19.050	0.50	20.00	0	95.2	69	132				
1,2-Dichloropropane	21.490	1.0	20.00	0	107	75	125				
1,3,5-Trimethylbenzene	27.250	1.0	20.00	0	136	74	131				S
1,3-Dichlorobenzene	24.330	1.0	20.00	0	122	75	124				
1,3-Dichloropropane	20.360	1.0	20.00	0	102	73	126				
1,4-Dichlorobenzene	22.460	1.0	20.00	0	112	74	123				
2,2-Dichloropropane	22.270	1.0	20.00	0	111	69	137				
2-Butanone	97.830	10	200.0	0	48.9	49	136				S
2-Chlorotoluene	25.100	1.0	20.00	0	126	73	126				
4-Chlorotoluene	26.610	1.0	20.00	0	133	74	128				S
4-Isopropyltoluene	28.780	1.0	20.00	0	144	73	130				S
4-Methyl-2-pentanone	183.850	10	200.0	0	91.9	58	134				
Acrolein	146.110	5.0	200.0	0	73.1	75	125				S
Acrylonitrile	147.560	2.0	200.0	0	73.8	75	125				S
Benzene	23.270	1.0	20.00	0	116	81	122				
Bromobenzene	22.970	1.0	20.00	0	115	76	124				

Qualifiers:

- | | | |
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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N021534-001GMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 111582						
Client ID: ZZZZZ	Batch ID: CA16VW026	TestNo: EPA 8260B		Analysis Date: 11/9/2016	SeqNo: 2473050						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromochloromethane	19.490	1.0	20.00	0	97.5	65	129				
Bromodichloromethane	20.720	1.0	20.00	0	104	76	121				
Bromoform	18.780	1.0	20.00	0	93.9	69	128				
Bromomethane	28.640	1.0	20.00	0	143	53	141				S
Carbon disulfide	22.330	1.0	20.00	0	112	75	125				
Carbon tetrachloride	25.680	0.50	20.00	0	128	66	138				
Chlorobenzene	23.400	1.0	20.00	0	117	81	122				
Chloroethane	34.100	1.0	20.00	0	170	58	133				S
Chloroform	20.490	1.0	20.00	0	102	69	128				
Chloromethane	27.870	1.0	20.00	0	139	56	131				S
cis-1,2-Dichloroethene	19.910	1.0	20.00	0	99.6	72	126				
cis-1,3-Dichloropropene	22.520	1.0	20.00	0	113	69	131				
Di-isopropyl ether	20.800	1.0	20.00	0	104	70	130				
Dibromochloromethane	21.230	1.0	20.00	0	106	66	133				
Dibromomethane	19.180	1.0	20.00	0	95.9	76	125				
Dichlorodifluoromethane	29.350	1.0	20.00	0	147	53	153				
Ethyl tert-butyl ether	21.230	1.0	20.00	0	106	70	130				
Ethylbenzene	25.120	1.0	20.00	0	126	73	127				
Freon-113	20.710	1.0	20.00	0	104	75	125				
Hexachlorobutadiene	24.290	1.0	20.00	0	121	67	131				
Isopropylbenzene	27.730	1.0	20.00	0	139	75	127				S
m,p-Xylene	53.460	1.0	40.00	0.08000	133	76	128				S
Methylene chloride	19.450	2.0	20.00	0	97.3	63	137				
MTBE	18.340	1.0	20.00	0	91.7	65	123				
n-Butylbenzene	26.330	1.0	20.00	0	132	69	137				
n-Propylbenzene	27.790	1.0	20.00	0	139	72	129				S
Naphthalene	16.640	1.0	20.00	0	83.2	54	138				
o-Xylene	25.300	1.0	20.00	0	127	80	121				S
sec-Butylbenzene	27.990	1.0	20.00	0	140	72	127				S
Styrene	21.770	1.0	20.00	0	109	65	134				

Qualifiers:

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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N021534-001GMS		SampType: MS		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 111582		
Client ID: ZZZZZ		Batch ID: CA16VW026		TestNo: EPA 8260B				Analysis Date: 11/9/2016		SeqNo: 2473050		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Tert-amyl methyl ether	21.610	1.0	20.00	0	108	70	130					
Tert-Butanol	75.300	5.0	100.0	0	75.3	70	130					
tert-Butylbenzene	27.850	1.0	20.00	0	139	70	129				S	
Tetrachloroethene	26.200	1.0	20.00	0	131	66	128				S	
Toluene	23.230	2.0	20.00	0.1000	116	77	122					
trans-1,2-Dichloroethene	20.790	1.0	20.00	0	104	63	137					
trans-1,3-Dichloropropene	20.730	1.0	20.00	0	104	59	135					
Trichloroethene	23.830	1.0	20.00	0	119	70	127					
Trichlorofluoromethane	26.540	1.0	20.00	0	133	57	129				S	
Vinyl chloride	28.320	0.50	20.00	0	142	50	134				S	
Xylenes, Total	78.760	2.0	60.00	0	131	75	125				S	
Surr: 1,2-Dichloroethane-d4	20.630		25.00		82.5	72	119					
Surr: 4-Bromofluorobenzene	26.150		25.00		105	76	119					
Surr: Dibromofluoromethane	21.650		25.00		86.6	85	115					
Surr: Toluene-d8	24.680		25.00		98.7	81	120					

Sample ID: N021534-001GMSD		SampType: MSD		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 111582		
Client ID: ZZZZZ		Batch ID: CA16VW026		TestNo: EPA 8260B				Analysis Date: 11/9/2016		SeqNo: 2473051		
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	23.00	5.08	20		
1,1,1-Trichloroethane	20.880	1.0	20.00	0	104	67	132	23.24	10.7	20		
1,1,2,2-Tetrachloroethane	17.910	1.0	20.00	0	89.6	63	128	18.75	4.58	20		
1,1,2-Trichloroethane	17.860	1.0	20.00	0	89.3	75	125	18.28	2.32	20		
1,1-Dichloroethane	19.610	0.50	20.00	0	98.0	69	133	20.77	5.75	20		
1,1-Dichloroethene	20.170	1.0	20.00	0	101	68	130	22.51	11.0	20		
1,1-Dichloropropene	22.470	1.0	20.00	0	112	73	132	25.43	12.4	20		
1,2,3-Trichlorobenzene	19.280	1.0	20.00	0	96.4	67	137	20.49	6.08	20		
1,2,3-Trichloropropane	17.080	1.0	20.00	0	85.4	73	124	17.89	4.63	20		
1,2,4-Trichlorobenzene	20.100	1.0	20.00	0	101	66	134	21.66	7.47	20		

Qualifiers:

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CLIENT: CH2MHill
 Work Order: N021533
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N021534-001GMSD		SampType: MSD		TestCode: 8260_WP_SF			Units: ug/L			Prep Date:		RunNo: 111582	
Client ID: ZZZZZZ		Batch ID: CA16VW026		TestNo: EPA 8260B			Analysis Date: 11/9/2016			SeqNo: 2473051			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
1,2,4-Trimethylbenzene	24.540	1.0	20.00	0	123	74	132	27.56	11.6	20			
1,2-Dibromo-3-chloropropane	15.590	2.0	20.00	0	78.0	50	132	16.59	6.22	20			
1,2-Dibromoethane	18.430	1.0	20.00	0	92.2	80	121	18.87	2.36	20			
1,2-Dichlorobenzene	22.510	1.0	20.00	0	113	71	122	23.93	6.12	20			
1,2-Dichloroethane	18.530	0.50	20.00	0	92.6	69	132	19.05	2.77	20			
1,2-Dichloropropane	20.550	1.0	20.00	0	103	75	125	21.49	4.47	20			
1,3,5-Trimethylbenzene	24.630	1.0	20.00	0	123	74	131	27.25	10.1	20			
1,3-Dichlorobenzene	22.940	1.0	20.00	0	115	75	124	24.33	5.88	20			
1,3-Dichloropropane	20.000	1.0	20.00	0	100	73	126	20.36	1.78	20			
1,4-Dichlorobenzene	21.210	1.0	20.00	0	106	74	123	22.46	5.72	20			
2,2-Dichloropropane	19.820	1.0	20.00	0	99.1	69	137	22.27	11.6	20			
2-Butanone	99.210	10	200.0	0	49.6	49	136	97.83	1.40	20			
2-Chlorotoluene	22.970	1.0	20.00	0	115	73	126	25.10	8.86	20			
4-Chlorotoluene	23.810	1.0	20.00	0	119	74	128	26.61	11.1	20			
4-Isopropyltoluene	25.430	1.0	20.00	0	127	73	130	28.78	12.4	20			
4-Methyl-2-pentanone	182.100	10	200.0	0	91.0	58	134	183.8	0.956	20			
Acrolein	148.260	5.0	200.0	0	74.1	75	125	146.1	1.46	20	S		
Acrylonitrile	154.400	2.0	200.0	0	77.2	75	125	147.6	4.53	20			
Benzene	21.930	1.0	20.00	0	110	81	122	23.27	5.93	20			
Bromobenzene	21.560	1.0	20.00	0	108	76	124	22.97	6.33	20			
Bromochloromethane	19.310	1.0	20.00	0	96.6	65	129	19.49	0.928	20			
Bromodichloromethane	19.920	1.0	20.00	0	99.6	76	121	20.72	3.94	20			
Bromoform	18.530	1.0	20.00	0	92.6	69	128	18.78	1.34	20			
Bromomethane	25.070	1.0	20.00	0	125	53	141	28.64	13.3	20			
Carbon disulfide	20.130	1.0	20.00	0	101	75	125	22.33	10.4	20			
Carbon tetrachloride	22.420	0.50	20.00	0	112	66	138	25.68	13.6	20			
Chlorobenzene	21.980	1.0	20.00	0	110	81	122	23.40	6.26	20			
Chloroethane	30.630	1.0	20.00	0	153	58	133	34.10	10.7	20	S		
Chloroform	19.860	1.0	20.00	0	99.3	69	128	20.49	3.12	20			
Chloromethane	24.390	1.0	20.00	0	122	56	131	27.87	13.3	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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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N021534-001GMSD SampType: MSD TestCode: 8260_WP_SF Units: ug/L		Prep Date:		RunNo: 111582							
Client ID: ZZZZZZ Batch ID: CA16VW026 TestNo: EPA 8260B		Analysis Date: 11/9/2016		SeqNo: 2473051							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,2-Dichloroethene	19.150	1.0	20.00	0	95.8	72	126	19.91	3.89	20	
cis-1,3-Dichloropropene	21.700	1.0	20.00	0	108	69	131	22.52	3.71	20	
Di-isopropyl ether	20.130	1.0	20.00	0	101	70	130	20.80	3.27	20	
Dibromochloromethane	20.480	1.0	20.00	0	102	66	133	21.23	3.60	20	
Dibromomethane	18.780	1.0	20.00	0	93.9	76	125	19.18	2.11	20	
Dichlorodifluoromethane	25.460	1.0	20.00	0	127	53	153	29.35	14.2	20	
Ethyl tert-butyl ether	20.830	1.0	20.00	0	104	70	130	21.23	1.90	20	
Ethylbenzene	22.650	1.0	20.00	0	113	73	127	25.12	10.3	20	
Freon-113	17.820	1.0	20.00	0	89.1	75	125	20.71	15.0	20	
Hexachlorobutadiene	21.340	1.0	20.00	0	107	67	131	24.29	12.9	20	
Isopropylbenzene	24.070	1.0	20.00	0	120	75	127	27.73	14.1	20	
m,p-Xylene	48.940	1.0	40.00	0.08000	122	76	128	53.46	8.83	20	
Methylene chloride	18.970	2.0	20.00	0	94.8	63	137	19.45	2.50	20	
MTBE	18.200	1.0	20.00	0	91.0	65	123	18.34	0.766	20	
n-Butylbenzene	22.590	1.0	20.00	0	113	69	137	26.33	15.3	20	
n-Propylbenzene	24.340	1.0	20.00	0	122	72	129	27.79	13.2	20	
Naphthalene	15.650	1.0	20.00	0	78.2	54	138	16.64	6.13	20	
o-Xylene	23.570	1.0	20.00	0	118	80	121	25.30	7.08	20	
sec-Butylbenzene	24.270	1.0	20.00	0	121	72	127	27.99	14.2	20	
Styrene	20.450	1.0	20.00	0	102	65	134	21.77	6.25	20	
Tert-amyl methyl ether	20.860	1.0	20.00	0	104	70	130	21.61	3.53	20	
Tert-Butanol	76.020	5.0	100.0	0	76.0	70	130	75.30	0.952	20	
tert-Butylbenzene	24.390	1.0	20.00	0	122	70	129	27.85	13.2	20	
Tetrachloroethene	23.270	1.0	20.00	0	116	66	128	26.20	11.8	20	
Toluene	21.420	2.0	20.00	0.1000	107	77	122	23.23	8.11	20	
trans-1,2-Dichloroethene	19.710	1.0	20.00	0	98.6	63	137	20.79	5.33	20	
trans-1,3-Dichloropropene	20.300	1.0	20.00	0	102	59	135	20.73	2.10	20	
Trichloroethene	22.000	1.0	20.00	0	110	70	127	23.83	7.99	20	
Trichlorofluoromethane	23.230	1.0	20.00	0	116	57	129	26.54	13.3	20	
Vinyl chloride	23.940	0.50	20.00	0	120	50	134	28.32	16.8	20	

Qualifiers:

- | | | |
|--|--|--|
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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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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N021534-001GMSD		SampType: MSD		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 111582	
Client ID: ZZZZZZ		Batch ID: CA16VW026		TestNo: EPA 8260B		Analysis Date: 11/9/2016				SeqNo: 2473051	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	72.510	2.0	60.00	0	121	75	125	78.76	8.26	20	
Surr: 1,2-Dichloroethane-d4	20.890		25.00		83.6	72	119		0		
Surr: 4-Bromofluorobenzene	26.770		25.00		107	76	119		0		
Surr: Dibromofluoromethane	22.320		25.00		89.3	85	115		0		
Surr: Toluene-d8	25.030		25.00		100	81	120		0		

Qualifiers:

- | | | |
|--|--|--|
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CLIENT: CH2MHill
Work Order: N021533
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: CA161114LCS		SampType: LCS		TestCode: 8260_WP_SF Units: ug/L		Prep Date:		RunNo: 111678			
Client ID: LCSW		Batch ID: CA16VW027		TestNo: EPA 8260B		Analysis Date: 11/14/2016		SeqNo: 2477814			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	296.430	10	200.0	0	148	40	135				S
Surr: 1,2-Dichloroethane-d4	25.520		25.00		102	72	119				
Surr: 4-Bromofluorobenzene	26.250		25.00		105	76	119				
Surr: Dibromofluoromethane	26.170		25.00		105	85	115				
Surr: Toluene-d8	25.400		25.00		102	81	120				

Sample ID: CA161114LCSD		SampType: LCSD		TestCode: 8260_WP_SF Units: ug/L		Prep Date:		RunNo: 111678			
Client ID: LCSS02		Batch ID: CA16VW027		TestNo: EPA 8260B		Analysis Date: 11/14/2016		SeqNo: 2477815			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	293.710	10	200.0	0	147	40	135	296.4	0.922	20	S
Surr: 1,2-Dichloroethane-d4	25.980		25.00		104	72	119		0		
Surr: 4-Bromofluorobenzene	26.460		25.00		106	76	119		0		
Surr: Dibromofluoromethane	26.820		25.00		107	85	115		0		
Surr: Toluene-d8	25.970		25.00		104	81	120		0		

Sample ID: CA161114MB3		SampType: MBLK		TestCode: 8260_WP_SF Units: ug/L		Prep Date:		RunNo: 111678			
Client ID: PBW		Batch ID: CA16VW027		TestNo: EPA 8260B		Analysis Date: 11/14/2016		SeqNo: 2477818			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	ND	10									
Surr: 1,2-Dichloroethane-d4	25.750		25.00		103	72	119				
Surr: 4-Bromofluorobenzene	25.090		25.00		100	76	119				
Surr: Dibromofluoromethane	25.470		25.00		102	85	115				
Surr: Toluene-d8	25.100		25.00		100	81	120				

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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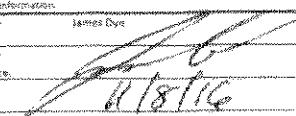
CA CEC #99

NO21533

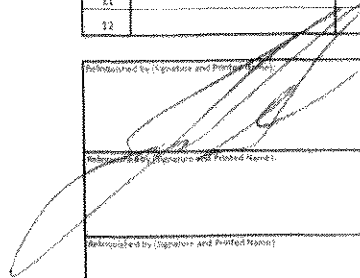

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 Marlon Carlin (marlon@atl-labs.com)

CHAIN OF CUSTODY RECORD

DATE: 11/8/16
 PAGE: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Required Site Information:		Section D Required Sampler Information:	
Company: Kinder Morgan Energy Partners Attention: Steve Deffbaugh	Report To: Dan Jablonski	Address: 1100 Town & Country Road Orange, CA 92668	Copy To: Steve Deffbaugh	Attention: Steve Deffbaugh - Ref. APEP 83195	Company: Kinder Morgan Energy Partners	Sampler Name: James Dye	 11/8/16
Email To: Steve.Deffbaugh@kindermorgan.com dave.jablonski@atl-labs.com	Purchase Order No.:	Phone: 714-500-4802	Project Name: STP Newark	Address: 1100 Town & Country Road Orange, CA 92668	ATL Project Manager: Marlon Carlin	Sampler Signature:	
						Sampler Date:	

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (E=SEAB, C=COAST)	CONTAINER TYPE		PRESERVATIVE	VOLUME (ml)	SAMPLING		TOTAL # OF CONTAINERS	Analysis Test	Full VOCs + Organics (or BTEX)	PH, TP, A, and P-lead (or TAD)	Comments
					# OF CONTAINERS				DATE	TIME					
1	INF-11-08	INFLUENT	WW	C					11/8/16	1345	8	X	X		
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

Released by (Signature and Printed Name):  Date / Time: 11/8/16 1345	Released by (Signature and Printed Name):  Date / Time: 11/8/16 1353	Turn Around Time (TAT): <input type="checkbox"/> A = Same Day <input checked="" type="checkbox"/> B = 24 Hours <input type="checkbox"/> C = 48 Hours <input type="checkbox"/> D = 72 Hours <input checked="" type="checkbox"/> E = 5 Workdays <input type="checkbox"/> F = 10 Workdays TAT starts at 8 AM the following day if samples received after 3:00 PM.	Special Instructions: NWC 11/11/16
---	--	---	---------------------------------------

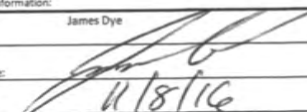
Matrix:	Preservatives:	Container Type:
W = Water O = Oil P = Product S = Soil Others/Specify:	H = HCl N = HNO3 S = H2SO4 Z = Zn(Ac)2 O = NaOH T = Na2S2O3	T = Tube J = Jar M = Metal V = VOA S = Tedlar P = Plastic C = Can

CA Coc #99

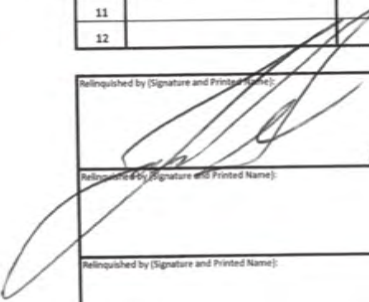

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 Marlon Cartin (marlon@atl-labs.com)

CHAIN OF CUSTODY RECORD

DATE: 11/8/16
 PAGE: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Section D Sampler Information:	
Company: Kinder Morgan Energy Partners Attention: Steve Defibaugh		Report To: Dan Jablonski		Attention: Steve Defibaugh - Ref. AF# 81195		Sampler Name: James Dye	
Address: 1100 Town & Country Road Orange, CA 92868		Copy To: Steve Defibaugh		Company Name: Kinder Morgan Energy Partners		Sampler Signature: 	
Email To: steve_defibaugh@kindermorgan.com daniel.jablonski@ch2m.com		Purchase Order No.:		Address: 1100 Town & Country Road Orange, CA 92868		Sample Date: 11/8/16	
Phone: 714-560-4802 Fax: 714-560-4801		Project Name: SFPP Norwalk		ATL Project Manager: Marlon Cartin			

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	CONTAINER TYPE		TOTAL # OF CONTAINERS	Analysis Test	Full VOCs + Oxygenates List (82608)	TPH-g, TPH-d, and TPH-oil (80158)	Comments
					# OF CONTAINERS	VOLUME (mL)					
					DATE	TIME					
1	INF-11-08	INFLUENT	WW	G	11/8/16	1340	8		X	X	N021533 - 01
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

Relinquished by (Signature and Printed Name):  Date / Time: 11/8/16 1345	Relinquished by (Signature and Printed Name):  Date / Time: 11/8/16 1353	Turn Around Time (TAT): <input type="checkbox"/> A = Same Day <input checked="" type="checkbox"/> B = 24 Hours <input type="checkbox"/> C = 48 Hours <input type="checkbox"/> D = 72 Hours <input type="checkbox"/> E = 5 Workdays <input type="checkbox"/> F = 10 Workdays TAT Starts at 8 AM the following day if samples received after 3:00 PM.	Special Instruction:
Relinquished by (Signature and Printed Name):	Relinquished by (Signature and Printed Name):		
Relinquished by (Signature and Printed Name):	Relinquished by (Signature and Printed Name):		

Matrix:	Preservatives:	Container Type:
W = Water WW = Wastewater	H = HCl N = HNO3 S = H2SO4	T = Tube V = VOA P = Pint
O = Oil P = Product S = Soil	Z = Zn(AC)2 O = NaOH T = Na2S2O3	J = Jar B = Tedlar G = Glass
Others/Specify:	Others/Specify:	M = Metal P = Plastic C = Can

CA COC #99

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: 11-8-16 Workorder: N021533
 Rep sample Temp (Deg C): Received on ice IR Gun ID: IRCA1
 Temp Blank: Yes No
 Carrier name: Asset
 Last 4 digits of Tracking No.: N/A Packing Material Used: none
 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 type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input checked="" 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 checked="" 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: Murphy A.

Reviewed By: [Signature] 11/11/2016

ASSET Laboratories

WORK ORDER Summary

09-Nov-16

WorkOrder: N021533

Client ID: CH2HI03

Project: SFPP - Norwalk Site

QC Level: Level IV

Date Received: 11/8/2016

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
N021533-001A	INF-11-08	11/8/2016 1:40:00 PM	11/15/2016	Wastewater	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	V-CA
			11/15/2016		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	V-CA
N021533-001B			11/15/2016		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			11/15/2016		EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			11/15/2016		EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N021533-002A	FOLDER		11/15/2016		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB

January 03, 2017

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

TEL:

FAX:

Workorder No.: N022402

RE: SFPP Norwalk


Attention: Dan Jablonski

Enclosed are the results for sample(s) received on December 27, 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,

 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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CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N022402

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 8260B:

Laboratory Control Sample (LCS) recovery biased high for Dichlorodifluoromethane in batch P16VW251 and 2-Butanone in batch P17VW001. Sample results were non-detect (ND) for these analytes therefore reanalysis of the samples was not necessary.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike (MS)/Matrix Spike Duplicate (MSD) is outside criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N022402
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N022402-001A	INF-12-27	Wastewater	12/27/2016 10:30:00 AM	12/27/2016	1/3/2017
N022402-001B	INF-12-27	Wastewater	12/27/2016 10:30:00 AM	12/27/2016	1/3/2017



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 03-Jan-17

CLIENT: CH2MHill
Lab Order: N022402
Project: SFPP Norwalk
Lab ID: N022402-001

Client Sample ID: INF-12-27
Collection Date: 12/27/2016 10:30:00 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: NV00922-MS5_161228A	QC Batch: P16VW251	PrepDate:	Analyst: LY			
1,1,1,2-Tetrachloroethane	ND	0.066	1.0	ug/L	1	12/28/2016 02:16 PM
1,1,1-Trichloroethane	ND	0.068	1.0	ug/L	1	12/28/2016 02:16 PM
1,1,2,2-Tetrachloroethane	ND	0.031	1.0	ug/L	1	12/28/2016 02:16 PM
1,1,2-Trichloroethane	ND	0.062	1.0	ug/L	1	12/28/2016 02:16 PM
1,1-Dichloroethane	ND	0.022	0.50	ug/L	1	12/28/2016 02:16 PM
1,1-Dichloroethene	ND	0.087	1.0	ug/L	1	12/28/2016 02:16 PM
1,1-Dichloropropene	ND	0.044	1.0	ug/L	1	12/28/2016 02:16 PM
1,2,3-Trichlorobenzene	ND	0.056	1.0	ug/L	1	12/28/2016 02:16 PM
1,2,3-Trichloropropane	ND	0.059	1.0	ug/L	1	12/28/2016 02:16 PM
1,2,4-Trichlorobenzene	ND	0.060	1.0	ug/L	1	12/28/2016 02:16 PM
1,2,4-Trimethylbenzene	1.2	0.042	1.0	ug/L	1	12/28/2016 02:16 PM
1,2-Dibromo-3-chloropropane	ND	0.047	2.0	ug/L	1	12/28/2016 02:16 PM
1,2-Dibromoethane	ND	0.057	1.0	ug/L	1	12/28/2016 02:16 PM
1,2-Dichlorobenzene	ND	0.040	1.0	ug/L	1	12/28/2016 02:16 PM
1,2-Dichloroethane	ND	0.064	0.50	ug/L	1	12/28/2016 02:16 PM
1,2-Dichloropropane	ND	0.062	1.0	ug/L	1	12/28/2016 02:16 PM
1,3,5-Trimethylbenzene	1.3	0.015	1.0	ug/L	1	12/28/2016 02:16 PM
1,3-Dichlorobenzene	ND	0.057	1.0	ug/L	1	12/28/2016 02:16 PM
1,3-Dichloropropane	ND	0.040	1.0	ug/L	1	12/28/2016 02:16 PM
1,4-Dichlorobenzene	ND	0.030	1.0	ug/L	1	12/28/2016 02:16 PM
2,2-Dichloropropane	ND	0.026	1.0	ug/L	1	12/28/2016 02:16 PM
2-Butanone	ND	0.48	10	ug/L	1	1/2/2017 05:57 PM
2-Chlorotoluene	ND	0.040	1.0	ug/L	1	12/28/2016 02:16 PM
4-Chlorotoluene	ND	0.036	1.0	ug/L	1	12/28/2016 02:16 PM
4-Isopropyltoluene	ND	0.022	1.0	ug/L	1	12/28/2016 02:16 PM
4-Methyl-2-pentanone	ND	0.17	10	ug/L	1	12/28/2016 02:16 PM
Acetone	ND	1.1	10	ug/L	1	12/28/2016 02:16 PM
Benzene	1.2	0.036	1.0	ug/L	1	12/28/2016 02:16 PM
Bromobenzene	ND	0.043	1.0	ug/L	1	12/28/2016 02:16 PM
Bromochloromethane	ND	0.22	1.0	ug/L	1	12/28/2016 02:16 PM
Bromodichloromethane	ND	0.031	1.0	ug/L	1	12/28/2016 02:16 PM
Bromoform	ND	0.32	1.0	ug/L	1	12/28/2016 02:16 PM
Bromomethane	ND	0.32	1.0	ug/L	1	12/28/2016 02:16 PM
Carbon disulfide	ND	0.025	1.0	ug/L	1	12/28/2016 02:16 PM
Carbon tetrachloride	ND	0.057	0.50	ug/L	1	12/28/2016 02:16 PM
Chlorobenzene	ND	0.036	1.0	ug/L	1	12/28/2016 02:16 PM

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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ANALYTICAL RESULTS

Print Date: 03-Jan-17

CLIENT: CH2MHill
Lab Order: N022402
Project: SFPP Norwalk
Lab ID: N022402-001

Client Sample ID: INF-12-27
Collection Date: 12/27/2016 10:30:00 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:	QC Batch:	PrepDate:	Analyst:			
NV00922-MS5_161228A	P16VW251		LY			
Chloroethane	ND	0.099	1.0	ug/L	1	12/28/2016 02:16 PM
Chloroform	ND	0.036	1.0	ug/L	1	12/28/2016 02:16 PM
Chloromethane	ND	0.12	1.0	ug/L	1	12/28/2016 02:16 PM
cis-1,2-Dichloroethene	ND	0.051	1.0	ug/L	1	12/28/2016 02:16 PM
cis-1,3-Dichloropropene	ND	0.044	1.0	ug/L	1	12/28/2016 02:16 PM
Di-isopropyl ether	8.7	0.017	1.0	ug/L	1	12/28/2016 02:16 PM
Dibromochloromethane	ND	0.072	1.0	ug/L	1	12/28/2016 02:16 PM
Dibromomethane	ND	0.17	1.0	ug/L	1	12/28/2016 02:16 PM
Dichlorodifluoromethane	ND	0.070	1.0	ug/L	1	12/28/2016 02:16 PM
Ethyl tert-butyl ether	ND	0.039	1.0	ug/L	1	12/28/2016 02:16 PM
Ethylbenzene	ND	0.036	1.0	ug/L	1	12/28/2016 02:16 PM
Freon-113	ND	0.074	1.0	ug/L	1	12/28/2016 02:16 PM
Hexachlorobutadiene	ND	0.11	1.0	ug/L	1	12/28/2016 02:16 PM
Isopropylbenzene	ND	0.034	1.0	ug/L	1	12/28/2016 02:16 PM
m,p-Xylene	0.68	0.024	1.0	J ug/L	1	12/28/2016 02:16 PM
Methylene chloride	1.2	0.28	2.0	J ug/L	1	12/28/2016 02:16 PM
MTBE	1.4	0.062	1.0	ug/L	1	12/28/2016 02:16 PM
n-Butylbenzene	ND	0.031	1.0	ug/L	1	12/28/2016 02:16 PM
n-Propylbenzene	ND	0.018	1.0	ug/L	1	12/28/2016 02:16 PM
Naphthalene	ND	0.048	1.0	ug/L	1	12/28/2016 02:16 PM
o-Xylene	1.3	0.042	1.0	ug/L	1	12/28/2016 02:16 PM
sec-Butylbenzene	ND	0.025	1.0	ug/L	1	12/28/2016 02:16 PM
Styrene	ND	0.035	1.0	ug/L	1	12/28/2016 02:16 PM
Tert-amyl methyl ether	ND	0.039	1.0	ug/L	1	12/28/2016 02:16 PM
Tert-Butanol	2200	3.0	50	ug/L	10	1/2/2017 05:34 PM
tert-Butylbenzene	ND	0.030	1.0	ug/L	1	12/28/2016 02:16 PM
Tetrachloroethene	ND	0.16	1.0	ug/L	1	12/28/2016 02:16 PM
Toluene	ND	0.042	2.0	ug/L	1	12/28/2016 02:16 PM
trans-1,2-Dichloroethene	ND	0.070	1.0	ug/L	1	12/28/2016 02:16 PM
trans-1,3-Dichloropropene	ND	0.039	1.0	ug/L	1	12/28/2016 02:16 PM
Trichloroethene	ND	0.12	1.0	ug/L	1	12/28/2016 02:16 PM
Trichlorofluoromethane	ND	0.031	1.0	ug/L	1	12/28/2016 02:16 PM
Vinyl chloride	ND	0.095	0.50	ug/L	1	12/28/2016 02:16 PM
Xylenes, Total	2.0	1.5	2.0	J ug/L	1	12/28/2016 02:16 PM
Surr: 1,2-Dichloroethane-d4	95.0	0	72-119	%REC	10	1/2/2017 05:34 PM
Surr: 1,2-Dichloroethane-d4	104	0	72-119	%REC	1	1/2/2017 05:57 PM

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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ANALYTICAL RESULTS

Print Date: 03-Jan-17

CLIENT: CH2MHill
Lab Order: N022402
Project: SFPP Norwalk
Lab ID: N022402-001

Client Sample ID: INF-12-27
Collection Date: 12/27/2016 10:30:00 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:	NV00922-MS5_161228A	QC Batch:	P16VW251	PrepDate:	Analyst:	LY	
Surr:	1,2-Dichloroethane-d4	82.9	0	72-119	%REC	1	12/28/2016 02:16 PM
Surr:	4-Bromofluorobenzene	101	0	76-119	%REC	1	1/2/2017 05:57 PM
Surr:	4-Bromofluorobenzene	99.0	0	76-119	%REC	10	1/2/2017 05:34 PM
Surr:	4-Bromofluorobenzene	103	0	76-119	%REC	1	12/28/2016 02:16 PM
Surr:	Dibromofluoromethane	92.9	0	85-115	%REC	1	12/28/2016 02:16 PM
Surr:	Dibromofluoromethane	103	0	85-115	%REC	1	1/2/2017 05:57 PM
Surr:	Dibromofluoromethane	99.2	0	85-115	%REC	10	1/2/2017 05:34 PM
Surr:	Toluene-d8	107	0	81-120	%REC	1	12/28/2016 02:16 PM
Surr:	Toluene-d8	101	0	81-120	%REC	1	1/2/2017 05:57 PM
Surr:	Toluene-d8	100	0	81-120	%REC	10	1/2/2017 05:34 PM

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

RunID:	NV00922-GC3_161228A	QC Batch:	60730	PrepDate:	12/28/2016	Analyst:	FJ
TPH-Diesel (C13-C22)	390	16	26	ug/L	1	12/28/2016 02:23 PM	
TPH-Oil (C23-C36)	130	14	26	ug/L	1	12/28/2016 02:23 PM	
Surr: Octacosane	92.9	0	26-152	%REC	1	12/28/2016 02:23 PM	
Surr: p-Terphenyl	97.3	0	57-132	%REC	1	12/28/2016 02:23 PM	

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

RunID:	NV00922-GC4_161228A	QC Batch:	E16VW085	PrepDate:	Analyst:	RB
TPH-Gasoline (C4-C12)	140	16	50	ug/L	1	12/28/2016 04:09 PM
Surr: Chlorobenzene - d5	134	0	74-138	%REC	1	12/28/2016 04:09 PM

TOTAL TPH

EPA 8015B

RunID:	NV00922-GC3_161228A	QC Batch:	R112507	PrepDate:	Analyst:	FJ
Total TPH	660	16	100	ug/L	1	12/28/2016

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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CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: MB-60730	SampType: MBLK	TestCode: 8015_W_FP_	Units: ug/L	Prep Date: 12/28/2016	RunNo: 112507						
Client ID: PBW	Batch ID: 60730	TestNo: EPA 8015B EPA 3510C		Analysis Date: 12/28/2016	SeqNo: 2516538						
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)	24.563	25									J
Surr: Octacosane	65.793		80.00		82.2	26	152				
Surr: p-Terphenyl	70.577		80.00		88.2	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



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CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: MB-R112507	SampType: MBLK	TestCode: 8015_W_SFP	Units: ug/L	Prep Date:	RunNo: 112507						
Client ID: PBW	Batch ID: R112507	TestNo: EPA 8015B		Analysis Date: 12/28/2016	SeqNo: 2516548						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	48.563	100									J

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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CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPF

Sample ID: E161228BLCS	SampType: LCS	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 112508							
Client ID: LCSW	Batch ID: E16VW085	TestNo: EPA 8015B	Analysis Date: 12/28/2016	SeqNo: 2516532							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1090.000	50	1000	0	109	67	136				
Surr: Chlorobenzene - d5	53998.000		50000		108	74	138				

Sample ID: E161228BMB3	SampType: MBLK	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 112508							
Client ID: PBW	Batch ID: E16VW085	TestNo: EPA 8015B	Analysis Date: 12/28/2016	SeqNo: 2516535							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	24.000	50									J
Surr: Chlorobenzene - d5	49465.000		50000		98.9	74	138				

Sample ID: N022402-001AMS	SampType: MS	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 112508							
Client ID: ZZZZZ	Batch ID: E16VW085	TestNo: EPA 8015B	Analysis Date: 12/28/2016	SeqNo: 2516654							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1065.000	50	1000	140.0	92.5	67	136				
Surr: Chlorobenzene - d5	52531.000		50000		105	74	138				

Sample ID: N022402-001AMSD	SampType: MSD	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 112508							
Client ID: ZZZZZ	Batch ID: E16VW085	TestNo: EPA 8015B	Analysis Date: 12/28/2016	SeqNo: 2516655							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1144.000	50	1000	140.0	100	67	136	1065	7.15	30	
Surr: Chlorobenzene - d5	58031.000		50000		116	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 |

CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P161228LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 112504						
Client ID: LCSW	Batch ID: P16VW251	TestNo: EPA 8260B		Analysis Date: 12/28/2016	SeqNo: 2516543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.990	1.0	20.00	0	100	81	129				
1,1,1-Trichloroethane	20.380	1.0	20.00	0	102	67	132				
1,1,2,2-Tetrachloroethane	15.980	1.0	20.00	0	79.9	63	128				
1,1,2-Trichloroethane	16.070	1.0	20.00	0	80.4	75	125				
1,1-Dichloroethane	19.240	0.50	20.00	0	96.2	69	133				
1,1-Dichloroethene	19.750	1.0	20.00	0	98.8	68	130				
1,1-Dichloropropene	22.900	1.0	20.00	0	114	73	132				
1,2,3-Trichlorobenzene	17.970	1.0	20.00	0	89.8	67	137				
1,2,3-Trichloropropane	15.830	1.0	20.00	0	79.2	73	124				
1,2,4-Trichlorobenzene	17.990	1.0	20.00	0	90.0	66	134				
1,2,4-Trimethylbenzene	20.420	1.0	20.00	0	102	74	132				
1,2-Dibromo-3-chloropropane	15.770	2.0	20.00	0	78.8	50	132				
1,2-Dibromoethane	17.720	1.0	20.00	0	88.6	80	121				
1,2-Dichlorobenzene	20.790	1.0	20.00	0	104	71	122				
1,2-Dichloroethane	17.710	0.50	20.00	0	88.6	69	132				
1,2-Dichloropropane	19.220	1.0	20.00	0	96.1	75	125				
1,3,5-Trimethylbenzene	20.990	1.0	20.00	0	105	74	131				
1,3-Dichlorobenzene	21.020	1.0	20.00	0	105	75	124				
1,3-Dichloropropane	19.720	1.0	20.00	0	98.6	73	126				
1,4-Dichlorobenzene	20.440	1.0	20.00	0	102	74	123				
2,2-Dichloropropane	19.750	1.0	20.00	0	98.8	69	137				
2-Chlorotoluene	22.190	1.0	20.00	0	111	73	126				
4-Chlorotoluene	22.270	1.0	20.00	0	111	74	128				
4-Isopropyltoluene	21.590	1.0	20.00	0	108	73	130				
4-Methyl-2-pentanone	134.400	10	200.0	0	67.2	58	134				
Acetone	93.220	10	200.0	0	46.6	40	135				
Benzene	20.530	1.0	20.00	0	103	81	122				
Bromobenzene	19.920	1.0	20.00	0	99.6	76	124				
Bromochloromethane	18.660	1.0	20.00	0	93.3	65	129				
Bromodichloromethane	19.110	1.0	20.00	0	95.6	76	121				

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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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P161228LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 112504						
Client ID: LCSW	Batch ID: P16VW251	TestNo: EPA 8260B		Analysis Date: 12/28/2016	SeqNo: 2516543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	15.600	1.0	20.00	0	78.0	69	128				
Bromomethane	21.000	1.0	20.00	0	105	53	141				
Carbon disulfide	20.010	1.0	20.00	0	100	75	125				
Carbon tetrachloride	21.100	0.50	20.00	0	106	66	138				
Chlorobenzene	21.580	1.0	20.00	0	108	81	122				
Chloroethane	21.100	1.0	20.00	0	106	58	133				
Chloroform	18.910	1.0	20.00	0	94.6	69	128				
Chloromethane	23.390	1.0	20.00	0	117	56	131				
cis-1,2-Dichloroethene	20.160	1.0	20.00	0	101	72	126				
cis-1,3-Dichloropropene	20.740	1.0	20.00	0	104	69	131				
Di-isopropyl ether	17.830	1.0	20.00	0	89.2	70	130				
Dibromochloromethane	19.040	1.0	20.00	0	95.2	66	133				
Dibromomethane	16.560	1.0	20.00	0	82.8	76	125				
Dichlorodifluoromethane	31.040	1.0	20.00	0	155	53	153				S
Ethyl tert-butyl ether	19.010	1.0	20.00	0	95.1	70	130				
Ethylbenzene	21.770	1.0	20.00	0	109	73	127				
Freon-113	16.590	1.0	20.00	0	83.0	75	125				
Hexachlorobutadiene	21.840	1.0	20.00	0	109	67	131				
Isopropylbenzene	20.280	1.0	20.00	0	101	75	127				
m,p-Xylene	47.610	1.0	40.00	0	119	76	128				
Methylene chloride	17.640	2.0	20.00	0	88.2	63	137				
MTBE	16.770	1.0	20.00	0	83.9	65	123				
n-Butylbenzene	19.440	1.0	20.00	0	97.2	69	137				
n-Propylbenzene	23.420	1.0	20.00	0	117	72	129				
Naphthalene	16.890	1.0	20.00	0	84.4	54	138				
o-Xylene	21.050	1.0	20.00	0	105	80	121				
sec-Butylbenzene	22.040	1.0	20.00	0	110	72	127				
Styrene	19.440	1.0	20.00	0	97.2	65	134				
Tert-amyl methyl ether	17.860	1.0	20.00	0	89.3	70	130				
tert-Butylbenzene	25.130	1.0	20.00	0	126	70	129				

Qualifiers:

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| 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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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P161228LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 112504						
Client ID: LCSW	Batch ID: P16VW251	TestNo: EPA 8260B		Analysis Date: 12/28/2016	SeqNo: 2516543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene	21.610	1.0	20.00	0	108	66	128				
Toluene	20.520	2.0	20.00	0	103	77	122				
trans-1,2-Dichloroethene	20.270	1.0	20.00	0	101	63	137				
trans-1,3-Dichloropropene	16.260	1.0	20.00	0	81.3	59	135				
Trichloroethene	21.300	1.0	20.00	0	106	70	127				
Trichlorofluoromethane	22.500	1.0	20.00	0	112	57	129				
Vinyl chloride	22.030	0.50	20.00	0	110	50	134				
Xylenes, Total	68.660	2.0	60.00	0	114	75	125				
Surr: 1,2-Dichloroethane-d4	21.620		25.00		86.5	72	119				
Surr: 4-Bromofluorobenzene	26.110		25.00		104	76	119				
Surr: Dibromofluoromethane	22.740		25.00		91.0	85	115				
Surr: Toluene-d8	25.630		25.00		103	81	120				

Sample ID: P161228MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 112504						
Client ID: PBW	Batch ID: P16VW251	TestNo: EPA 8260B		Analysis Date: 12/28/2016	SeqNo: 2516545						
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									

Qualifiers:

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| 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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CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P161228MB3	SampType: MBLK	TestCode: 8260_WP_SF Units: ug/L	Prep Date:	RunNo: 112504							
Client ID: PBW	Batch ID: P16VW251	TestNo: EPA 8260B	Analysis Date: 12/28/2016	SeqNo: 2516545							
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
1,2-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-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									

Qualifiers:

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|--|--|--|
| 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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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P161228MB3	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 112504						
Client ID: PBW	Batch ID: P16VW251	TestNo: EPA 8260B		Analysis Date: 12/28/2016	SeqNo: 2516545						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	0.960	2.0									J
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-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	22.360		25.00		89.4	72	119				
Surr: 4-Bromofluorobenzene	24.770		25.00		99.1	76	119				
Surr: Dibromofluoromethane	24.490		25.00		98.0	85	115				
Surr: Toluene-d8	26.120		25.00		104	81	120				

Qualifiers:

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|--|--|--|
| 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
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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N022401-001AMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 112504						
Client ID: ZZZZZZ	Batch ID: P16VW251	TestNo: EPA 8260B		Analysis Date: 12/28/2016	SeqNo: 2517135						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.350	1.0	20.00	0	107	81	129				
1,1,1-Trichloroethane	21.860	1.0	20.00	0	109	67	132				
1,1,2,2-Tetrachloroethane	15.260	1.0	20.00	0	76.3	63	128				
1,1,2-Trichloroethane	17.060	1.0	20.00	0	85.3	75	125				
1,1-Dichloroethane	20.530	0.50	20.00	0	103	69	133				
1,1-Dichloroethene	21.310	1.0	20.00	0	107	68	130				
1,1-Dichloropropene	23.620	1.0	20.00	0	118	73	132				
1,2,3-Trichlorobenzene	17.610	1.0	20.00	0	88.0	67	137				
1,2,3-Trichloropropane	14.860	1.0	20.00	0	74.3	73	124				
1,2,4-Trichlorobenzene	18.670	1.0	20.00	0	93.4	66	134				
1,2,4-Trimethylbenzene	20.990	1.0	20.00	0	105	74	132				
1,2-Dibromo-3-chloropropane	13.350	2.0	20.00	0	66.8	50	132				
1,2-Dibromoethane	17.350	1.0	20.00	0	86.8	80	121				
1,2-Dichlorobenzene	21.250	1.0	20.00	0	106	71	122				
1,2-Dichloroethane	18.140	0.50	20.00	0	90.7	69	132				
1,2-Dichloropropane	20.600	1.0	20.00	0	103	75	125				
1,3,5-Trimethylbenzene	21.920	1.0	20.00	0	110	74	131				
1,3-Dichlorobenzene	21.760	1.0	20.00	0	109	75	124				
1,3-Dichloropropane	19.760	1.0	20.00	0	98.8	73	126				
1,4-Dichlorobenzene	21.730	1.0	20.00	0	109	74	123				
2,2-Dichloropropane	22.060	1.0	20.00	0	110	69	137				
2-Chlorotoluene	23.090	1.0	20.00	0	115	73	126				
4-Chlorotoluene	23.110	1.0	20.00	0	116	74	128				
4-Isopropyltoluene	22.070	1.0	20.00	0	110	73	130				
4-Methyl-2-pentanone	126.980	10	200.0	0	63.5	58	134				
Acetone	61.010	10	200.0	0	30.5	40	135				S
Benzene	22.000	1.0	20.00	0	110	81	122				
Bromobenzene	20.570	1.0	20.00	0	103	76	124				
Bromochloromethane	18.950	1.0	20.00	0	94.8	65	129				
Bromodichloromethane	20.400	1.0	20.00	0	102	76	121				

Qualifiers:

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|--|--|--|
| 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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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N022401-001AMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 112504						
Client ID: ZZZZZZ	Batch ID: P16VW251	TestNo: EPA 8260B		Analysis Date: 12/28/2016	SeqNo: 2517135						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	15.520	1.0	20.00	0	77.6	69	128				
Bromomethane	22.460	1.0	20.00	0	112	53	141				
Carbon disulfide	21.730	1.0	20.00	0	109	75	125				
Carbon tetrachloride	21.580	0.50	20.00	0	108	66	138				
Chlorobenzene	22.600	1.0	20.00	0	113	81	122				
Chloroethane	23.020	1.0	20.00	0	115	58	133				
Chloroform	20.230	1.0	20.00	0	101	69	128				
Chloromethane	25.230	1.0	20.00	0	126	56	131				
cis-1,2-Dichloroethene	21.110	1.0	20.00	0	106	72	126				
cis-1,3-Dichloropropene	21.360	1.0	20.00	0	107	69	131				
Di-isopropyl ether	19.890	1.0	20.00	0	99.4	70	130				
Dibromochloromethane	20.090	1.0	20.00	0	100	66	133				
Dibromomethane	16.590	1.0	20.00	0	83.0	76	125				
Dichlorodifluoromethane	31.720	1.0	20.00	0	159	53	153				S
Ethyl tert-butyl ether	20.970	1.0	20.00	0	105	70	130				
Ethylbenzene	23.110	1.0	20.00	0	116	73	127				
Freon-113	18.230	1.0	20.00	0	91.2	75	125				
Hexachlorobutadiene	21.400	1.0	20.00	0	107	67	131				
Isopropylbenzene	20.400	1.0	20.00	0	102	75	127				
m,p-Xylene	49.970	1.0	40.00	0	125	76	128				
Methylene chloride	19.570	2.0	20.00	2.370	86.0	63	137				
MTBE	17.000	1.0	20.00	0	85.0	65	123				
n-Butylbenzene	20.010	1.0	20.00	0	100	69	137				
n-Propylbenzene	24.410	1.0	20.00	0	122	72	129				
Naphthalene	14.330	1.0	20.00	0	71.6	54	138				
o-Xylene	22.090	1.0	20.00	0	110	80	121				
sec-Butylbenzene	22.320	1.0	20.00	0	112	72	127				
Styrene	13.420	1.0	20.00	0	67.1	65	134				
Tert-amyl methyl ether	18.950	1.0	20.00	0	94.8	70	130				
tert-Butylbenzene	25.510	1.0	20.00	0	128	70	129				

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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CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N022401-001AMS		SampType: MS		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 112504	
Client ID: ZZZZZ		Batch ID: P16VW251		TestNo: EPA 8260B		Analysis Date: 12/28/2016				SeqNo: 2517135	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene	22.190	1.0	20.00	0	111	66	128				
Toluene	21.970	2.0	20.00	0	110	77	122				
trans-1,2-Dichloroethene	20.510	1.0	20.00	0	103	63	137				
trans-1,3-Dichloropropene	16.960	1.0	20.00	0	84.8	59	135				
Trichloroethene	21.840	1.0	20.00	0	109	70	127				
Trichlorofluoromethane	24.090	1.0	20.00	0	120	57	129				
Vinyl chloride	21.170	0.50	20.00	0	106	50	134				
Xylenes, Total	72.060	2.0	60.00	0	120	75	125				
Surr: 1,2-Dichloroethane-d4	22.140		25.00		88.6	72	119				
Surr: 4-Bromofluorobenzene	27.550		25.00		110	76	119				
Surr: Dibromofluoromethane	23.570		25.00		94.3	85	115				
Surr: Toluene-d8	26.410		25.00		106	81	120				

Sample ID: N022401-001AMSD		SampType: MSD		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 112504	
Client ID: ZZZZZ		Batch ID: P16VW251		TestNo: EPA 8260B		Analysis Date: 12/28/2016				SeqNo: 2517136	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.970	1.0	20.00	0	110	81	129	21.35	2.86	20	
1,1,1-Trichloroethane	24.210	1.0	20.00	0	121	67	132	21.86	10.2	20	
1,1,2,2-Tetrachloroethane	15.350	1.0	20.00	0	76.8	63	128	15.26	0.588	20	
1,1,2-Trichloroethane	17.360	1.0	20.00	0	86.8	75	125	17.06	1.74	20	
1,1-Dichloroethane	22.950	0.50	20.00	0	115	69	133	20.53	11.1	20	
1,1-Dichloroethene	24.300	1.0	20.00	0	122	68	130	21.31	13.1	20	
1,1-Dichloropropene	25.660	1.0	20.00	0	128	73	132	23.62	8.28	20	
1,2,3-Trichlorobenzene	18.230	1.0	20.00	0	91.2	67	137	17.61	3.46	20	
1,2,3-Trichloropropane	14.770	1.0	20.00	0	73.8	73	124	14.86	0.607	20	
1,2,4-Trichlorobenzene	19.590	1.0	20.00	0	98.0	66	134	18.67	4.81	20	
1,2,4-Trimethylbenzene	22.370	1.0	20.00	0	112	74	132	20.99	6.37	20	
1,2-Dibromo-3-chloropropane	14.090	2.0	20.00	0	70.4	50	132	13.35	5.39	20	
1,2-Dibromoethane	17.110	1.0	20.00	0	85.6	80	121	17.35	1.39	20	

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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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
 Work Order: N022402
 Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N022401-001AMSD		SampType: MSD		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 112504	
Client ID: ZZZZZZ		Batch ID: P16VW251		TestNo: EPA 8260B		Analysis Date: 12/28/2016		SeqNo: 2517136			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	21.680	1.0	20.00	0	108	71	122	21.25	2.00	20	
1,2-Dichloroethane	18.830	0.50	20.00	0	94.2	69	132	18.14	3.73	20	
1,2-Dichloropropane	20.950	1.0	20.00	0	105	75	125	20.60	1.68	20	
1,3,5-Trimethylbenzene	23.190	1.0	20.00	0	116	74	131	21.92	5.63	20	
1,3-Dichlorobenzene	22.690	1.0	20.00	0	113	75	124	21.76	4.18	20	
1,3-Dichloropropane	20.160	1.0	20.00	0	101	73	126	19.76	2.00	20	
1,4-Dichlorobenzene	22.410	1.0	20.00	0	112	74	123	21.73	3.08	20	
2,2-Dichloropropane	24.930	1.0	20.00	0	125	69	137	22.06	12.2	20	
2-Chlorotoluene	24.030	1.0	20.00	0	120	73	126	23.09	3.99	20	
4-Chlorotoluene	24.350	1.0	20.00	0	122	74	128	23.11	5.23	20	
4-Isopropyltoluene	23.630	1.0	20.00	0	118	73	130	22.07	6.83	20	
4-Methyl-2-pentanone	127.100	10	200.0	0	63.6	58	134	127.0	0.0945	20	
Acetone	63.090	10	200.0	0	31.5	40	135	61.01	3.35	20	S
Benzene	23.240	1.0	20.00	0	116	81	122	22.00	5.48	20	
Bromobenzene	20.940	1.0	20.00	0	105	76	124	20.57	1.78	20	
Bromochloromethane	21.100	1.0	20.00	0	106	65	129	18.95	10.7	20	
Bromodichloromethane	20.690	1.0	20.00	0	103	76	121	20.40	1.41	20	
Bromoform	15.440	1.0	20.00	0	77.2	69	128	15.52	0.517	20	
Bromomethane	28.320	1.0	20.00	0	142	53	141	22.46	23.1	20	SR
Carbon disulfide	24.560	1.0	20.00	0	123	75	125	21.73	12.2	20	
Carbon tetrachloride	23.880	0.50	20.00	0	119	66	138	21.58	10.1	20	
Chlorobenzene	23.590	1.0	20.00	0	118	81	122	22.60	4.29	20	
Chloroethane	25.060	1.0	20.00	0	125	58	133	23.02	8.49	20	
Chloroform	22.250	1.0	20.00	0	111	69	128	20.23	9.51	20	
Chloromethane	28.610	1.0	20.00	0	143	56	131	25.23	12.6	20	S
cis-1,2-Dichloroethene	22.900	1.0	20.00	0	114	72	126	21.11	8.13	20	
cis-1,3-Dichloropropene	22.420	1.0	20.00	0	112	69	131	21.36	4.84	20	
Di-isopropyl ether	21.890	1.0	20.00	0	109	70	130	19.89	9.57	20	
Dibromochloromethane	19.590	1.0	20.00	0	98.0	66	133	20.09	2.52	20	
Dibromomethane	17.030	1.0	20.00	0	85.2	76	125	16.59	2.62	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 |
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"Serving Clients with Passion and Professionalism"

CLIENT: CH2MHill
 Work Order: N022402
 Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N022401-001AMSD	SampType: MSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 112504						
Client ID: ZZZZZZ	Batch ID: P16VW251	TestNo: EPA 8260B		Analysis Date: 12/28/2016	SeqNo: 2517136						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	36.710	1.0	20.00	0	184	53	153	31.72	14.6	20	S
Ethyl tert-butyl ether	22.170	1.0	20.00	0	111	70	130	20.97	5.56	20	
Ethylbenzene	24.650	1.0	20.00	0	123	73	127	23.11	6.45	20	
Freon-113	20.840	1.0	20.00	0	104	75	125	18.23	13.4	20	
Hexachlorobutadiene	23.140	1.0	20.00	0	116	67	131	21.40	7.81	20	
Isopropylbenzene	21.940	1.0	20.00	0	110	75	127	20.40	7.27	20	
m,p-Xylene	53.100	1.0	40.00	0	133	76	128	49.97	6.07	20	S
Methylene chloride	21.340	2.0	20.00	2.370	94.8	63	137	19.57	8.65	20	
MTBE	17.690	1.0	20.00	0	88.4	65	123	17.00	3.98	20	
n-Butylbenzene	21.880	1.0	20.00	0	109	69	137	20.01	8.93	20	
n-Propylbenzene	26.130	1.0	20.00	0	131	72	129	24.41	6.81	20	S
Naphthalene	14.820	1.0	20.00	0	74.1	54	138	14.33	3.36	20	
o-Xylene	23.040	1.0	20.00	0	115	80	121	22.09	4.21	20	
sec-Butylbenzene	23.920	1.0	20.00	0	120	72	127	22.32	6.92	20	
Styrene	15.020	1.0	20.00	0	75.1	65	134	13.42	11.3	20	
Tert-amyl methyl ether	18.900	1.0	20.00	0	94.5	70	130	18.95	0.264	20	
tert-Butylbenzene	27.080	1.0	20.00	0	135	70	129	25.51	5.97	20	S
Tetrachloroethene	24.310	1.0	20.00	0	122	66	128	22.19	9.12	20	
Toluene	22.970	2.0	20.00	0	115	77	122	21.97	4.45	20	
trans-1,2-Dichloroethene	23.220	1.0	20.00	0	116	63	137	20.51	12.4	20	
trans-1,3-Dichloropropene	17.490	1.0	20.00	0	87.5	59	135	16.96	3.08	20	
Trichloroethene	23.960	1.0	20.00	0	120	70	127	21.84	9.26	20	
Trichlorofluoromethane	28.110	1.0	20.00	0	141	57	129	24.09	15.4	20	S
Vinyl chloride	25.670	0.50	20.00	0	128	50	134	21.17	19.2	20	
Xylenes, Total	76.140	2.0	60.00	0	127	75	125	72.06	5.51	20	S
Surr: 1,2-Dichloroethane-d4	23.230		25.00		92.9	72	119		0		
Surr: 4-Bromofluorobenzene	27.100		25.00		108	76	119		0		
Surr: Dibromofluoromethane	24.060		25.00		96.2	85	115		0		
Surr: Toluene-d8	26.350		25.00		105	81	120		0		

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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CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P170102LCS		SampType: LCS		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 112578	
Client ID: LCSW		Batch ID: P17VW001		TestNo: EPA 8260B		Analysis Date: 1/2/2017				SeqNo: 2520660	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Butanone	274.610	10	200.0	0	137	49	136				S
Tert-Butanol	82.910	5.0	100.0	0	82.9	70	130				
Surr: 1,2-Dichloroethane-d4	24.870		25.00		99.5	72	119				
Surr: 4-Bromofluorobenzene	25.530		25.00		102	76	119				
Surr: Dibromofluoromethane	26.060		25.00		104	85	115				
Surr: Toluene-d8	25.340		25.00		101	81	120				

Sample ID: P170102MB3		SampType: MBLK		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 112578	
Client ID: PBW		Batch ID: P17VW001		TestNo: EPA 8260B		Analysis Date: 1/2/2017				SeqNo: 2520663	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Butanone	ND	10									
Tert-Butanol	ND	5.0									
Surr: 1,2-Dichloroethane-d4	24.860		25.00		99.4	72	119				
Surr: 4-Bromofluorobenzene	25.080		25.00		100	76	119				
Surr: Dibromofluoromethane	25.580		25.00		102	85	115				
Surr: Toluene-d8	25.340		25.00		101	81	120				

Sample ID: N022384-002AMS		SampType: MS		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 112578	
Client ID: ZZZZZ		Batch ID: P17VW001		TestNo: EPA 8260B		Analysis Date: 1/2/2017				SeqNo: 2520669	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Butanone	184.980	10	200.0	6.840	89.1	49	136				
Tert-Butanol	102.550	5.0	100.0	0	103	70	130				
Surr: 1,2-Dichloroethane-d4	25.700		25.00		103	72	119				
Surr: 4-Bromofluorobenzene	25.120		25.00		100	76	119				
Surr: Dibromofluoromethane	26.620		25.00		106	85	115				
Surr: Toluene-d8	25.140		25.00		101	81	120				

Qualifiers:

- | | | |
|--|--|--|
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CLIENT: CH2MHill
Work Order: N022402
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N022384-002AMSD		SampType: MSD		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 112578	
Client ID: ZZZZZ		Batch ID: P17VW001		TestNo: EPA 8260B		Analysis Date: 1/2/2017				SeqNo: 2520670	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Butanone	190.590	10	200.0	6.840	91.9	49	136	185.0	2.99	20	
Tert-Butanol	82.800	5.0	100.0	0	82.8	70	130	102.6	21.3	20	R
Surr: 1,2-Dichloroethane-d4	25.180		25.00		101	72	119		0		
Surr: 4-Bromofluorobenzene	25.430		25.00		102	76	119		0		
Surr: Dibromofluoromethane	26.230		25.00		105	85	115		0		
Surr: Toluene-d8	25.460		25.00		102	81	120		0		

Qualifiers:

- | | | |
|--|--|--|
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N022402/1-4

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)

CHAIN OF CUSTODY RECORD

DATE: 12/27/14
 PAGE: 1 of 1

Section A Required Client Information		Section B Required Project Information		Section C Analyzer Information		Section D Sampler Information	
Company:	Kinder Morgan Energy Partners Attention: Steve DeFbaugh	Report To:	Don Jablonski	Analyst:	Steve DeFbaugh Ref: AF66 11191	Sampler Name:	James Dye
Address:	1100 Town & Country Road Orange, CA 92868	Copy To:	Steve DeFbaugh	Company Name:	Kinder Morgan Energy Partners	Sampler Signature:	
Email To:	atl@atl-labs.com atl@atl-labs.com	Purchase Order No.:		Address:	1100 Town & Country Road Orange, CA 92868	Sample Date:	12/27/14
Phone:	714-560-4802	Fac:	714-560-4801	ATL Project Manager:	Marlon Cartin		
		Project Name:	SFP2 Norwalk				

ITEM #	SAMPLE ID	LOCATION/DESCRIPTION	MATRIX	SAMPLE TYPE (S: Grab, C: Comp)	CONTAINER TYPE		TOTAL # OF CONTAINERS	SAMPLE REPRESENTATION (%)	ANALYSIS TEST	PRESERVATIVE	VOLUME (mL)	SAMPLING	DATE	TIME	COMMENTS	
					# OF CONTAINERS											
1	IMP-12-27	INFLUENT	WW	G			8	7.3					12/27/14	1030		N022402-01
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

Requested by (Signature and Printed Name): Date/Time: 12/27/14 11:20	Requested by (Signature and Printed Name): Date/Time: 12/27/14 15:00	Turn Around Time (TAT): <input type="checkbox"/> A = Same Day <input type="checkbox"/> B = 24 Hours <input type="checkbox"/> C = 48 Hours <input type="checkbox"/> D = 72 Hours <input type="checkbox"/> E = 5 Workdays <input type="checkbox"/> F = 10 Workdays TAT Starts at 8 AM the following day if samples received after 3:00 PM.	Special Instructions: 3.9°C 50# #2
Requested by (Signature and Printed Name): Date/Time: 12/27/14 16:00	Requested by (Signature and Printed Name): Date/Time: 12/28/14 8:00 am		

Matrix:	Preservatives:	Container Type:
W = Water	H = HCl	T = Tube
WW = Wastewater	N = HNO3	V = VOA
O = Oil	S = H2SO4	P = Pint
P = Product	Z = Zn(Ac)2	J = Jar
S = Sol	O = NaOH	B = Tedlar
Others/Specify:	T = Na2S2O3	G = Glass
	Others/Specify:	M = Metal
		P = Plastic
		C = Can

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: 12/27/2016 Workorder: N022402
 Rep sample Temp (Deg C): 3.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: Golden State Overnight
 Last 4 digits of Tracking No.: 7132 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 12/28/2016

Reviewed By: [Signature] 12/28/2016

ASSET Laboratories

WORK ORDER Summary

29-Dec-16

WorkOrder: N022402

Client ID: CH2HI03

Project: SFPP Norwalk

QC Level: RTNE

Date Received: 12/27/2016

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N022402-001A	INF-12-27	12/27/2016 10:30:00 AM	12/28/2016	Wastewater	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
			12/28/2016		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
N022402-001B			12/28/2016		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			12/28/2016		EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			12/28/2016		EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N022402-002A	FOLDER		12/28/2016		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 #: 534497132

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



50841781

Print Date: 12/27/2016 5:27 PM

Package 1 of 3

LABEL INSTRUCTIONS:

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

Do not use a thermal printer to print this label on a laser or inkjet printer. Securely attach

Use the "Print Label" button on this page to print this label to your package, do not cover the barcode.

Use the "Print Label" button on this page to print this label to your package, do not cover the barcode.

3.9°C
JR #2