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KINDER MORGAN
ENERGY PARTNERS, L.P.

SFPP, L.P.
Operating Partnership

February 15, 2021

California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013

Re: Effluent Monitoring Report
October through December 2020
SFPP, L.P. Norwalk Pump Station
15306 Norwalk Boulevard, Norwalk, California
(NPDES No. CA0063509, CI No. 7497)

Attention: Information Technology Unit

In reference to the subject National Pollutant Discharge Elimination System (NPDES) permit, please find enclosed the Fourth Quarter 2020 Effluent Monitoring Report for the subject discharge.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the 15th day of February 2021.
at 11:15 AM

_____ (signature)

Ryan Koch (printed name)

P.G. Specialist - Remediation (title)

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February 15, 2021

Attention: Mr. Ryan Koch
Kinder Morgan, Inc.
1001 Louisiana Street
Houston, Texas 77002

Subject: Effluent Monitoring Report, October 1 to December 31, 2020 (Fourth Quarter 2020)
SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California
(NPDES No. CA0063509, CI No. 7497, Order No. R4-2016-0309)

Dear Mr. Koch,

This report summarizes National Pollutant Discharge Elimination System (NPDES) monitoring related to the discharge of treated groundwater from the Kinder Morgan, Inc. (Kinder Morgan) product recovery and groundwater extraction (GWE) system located at the SFPP, L.P. (SFPP) Norwalk Pump Station within the Defense Fuel Support Point Norwalk facility, at 15306 Norwalk Boulevard, Norwalk, California (the site; Figures 1 and 2).

This report describes NPDES monitoring activities during the period of October 1 to December 31, 2020. Kinder Morgan performed operation, maintenance, and monitoring tasks on the product recovery and GWE systems during this time. This report has been prepared based on NPDES monitoring conducted by Kinder Morgan.

Remediation Systems

Kinder Morgan operates remediation systems consisting of soil vapor extraction (SVE), total fluids extraction (TFE) of free product and/or groundwater using a top-loading pump, GWE using a bottom-loading pump, and treatment of extracted soil vapors and groundwater to address the south-central and southeastern areas of the site. Horizontal biosparging is also employed in the south-central and southeastern areas to enhance natural attenuation of hydrocarbon constituents, and will soon be implemented in the offsite/south-central area, as described below.

The remedial objectives 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:

a) South-central area (currently inactive)
   - 13 TFE wells
   - 24 onsite SVE wells (most collocated with TFE wells)
   - 1 horizontal biosparge well (BS-01)

b) Offsite/south-central area
   - 7 TFE wells
   - 6 offsite SVE wells (5 collocated with TFE wells)
   - 1 horizontal biosparge well (BS-03; not yet operative)
   - 1 horizontal SVE well (HSVE-01; not yet operative)

c) Southeastern area (24-inch block valve area)
   - 4 TFE wells (GM W-O-15, GMW-O-18, GMW-36, and GMW-SF-9)
   - 1 GWE well (GMW-SF-10)
   - 9 SVE wells (3 collocated with TFE wells)
   - 1 horizontal biosparge well (BS-02)

The remediation system well network is shown on Figure 2. A brief description of each system is provided in the sections that follow.

Groundwater Treatment System

Currently, the groundwater treatment system (GWTS) handles free product and groundwater recovered from the offsite/south-central and southeastern parts of the area. Free product and groundwater recovered by pneumatically operated, top-loading total fluid pumps and bottom-loading groundwater pumps are piped to a dissolved air flotation oil-water separator (DAF/OWS). Free product, if any, from the DAF/OWS is collected in a storage tank and transported to an offsite location. Water from the OWS is gravity drained into a 300-gallon transfer tank. From the transfer tank, the water is then treated using liquid-phase granular activated carbon (LGAC). Treated water is routed through an onsite 3,000-gallon equalization tank. Two fluidized bed bioreactors installed downstream of the equalization tank treat fuel oxygenates such as tertiary butyl alcohol and methyl tertiary butyl ether. 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 the NPDES permit (Permit Number [No.] CA0063509; Order No. R4-2016-0309), which was adopted on September 7, 2016, and became effective on November 1, 2016.

Soil Vapor Extraction System

SVE is performed using a blower to remove soil vapors from the south-central and southeastern areas of the site. The extracted vapors are conveyed to a knock-out tank that separates entrained moisture from the soil vapor. Accumulated moisture in the knock-out tank is treated by the main GWTS described above. The soil vapors are then treated in a regenerative thermal oxidizer where

volatile organic compounds (VOCs) are converted to carbon dioxide and water prior to being discharged to the atmosphere. Operation of the GWTS and SVE systems is conducted in accordance with Permits to Operate (Permit Nos. G46188 A/N 578779 and G46187 A/N 578777, respectively; ID 110835) issued by the South Coast Air Quality Management District.

The south-central SVE system remains offline as part of the natural source zone depletion (NSZD) pilot study. In May 2020, Kinder Morgan implemented an NSZD performance monitoring pilot study in the south-central and southeastern areas of the site, as described in the NSZD Work Plan (Jacobs, 2019), and approved by the California Regional Water Quality Control Board, Los Angeles Region (Water Board) in a letter dated April 8, 2020 (Water Board, 2020). The expanded southeastern SVE system was restarted on May 15, 2020; the well network includes wells VEW-3, VEW-4, PZ-5, GMW-O-16, GMW-O-19, and MW-8; and TFE/SVE wells GMW-O-15, GMW-O-18, and GMW-36. These wells connect to the regenerative thermal oxidizer via a new, dedicated 1,200-foot-long, 6-inch high-density polyethylene (HDPE) header. The expanded southeastern SVE system is currently operating at a combined flow of 200 standard cubic feet per minute (scfm), under a vacuum pressure of 50 inches of water. In addition, there are four SVE wells currently operating in the offsite/south-central area, including GMW-O-11, GMW-O-12, GMW-O-20, and GMW-O-23.

A new horizontal SVE well (HSVE-01) was installed in the offsite/south-central area in December 2019 and is designed to extract vapors created from operating the new horizontal biosparge well BS-03 (described in the following section). Horizontal SVE well HSVE-01 is constructed of 6-inch-diameter Schedule 10 stainless-steel casing and screen and was completed to a depth of approximately 20 feet below ground surface (bgs). The length of the HSVE-01 screen is 500 feet, and the total length of the well is 745 feet. A construction completion report documenting construction activities and specifications was submitted to the Water Board in June 2020 (Jacobs, 2020). HSVE-01 is currently inoperative, but is expected to be turned on in early-2021 after it is connected to the treatment system.

Horizontal Biosparge System

Biosparging involves introducing air into the groundwater in situ to enhance biodegradation of VOCs present in product and groundwater. Horizontal biosparge wells were installed in three locations at the site, as described below.

South-Central Area (currently inoperative): In December 2014, Kinder Morgan completed installation of a horizontal biosparge system in the south-central area of the site, which consists of a horizontal biosparge well (BS-01) and a 500-scfm compressor. To reduce the potential for off-gassing of VOCs while biosparging, the SVE system has an interlock that will not allow the biosparge to operate without the SVE system running. 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 bgs. The lateral distance of the screen interval is 600 feet centered below the central portion of the south-central area hydrocarbon plume. Further details regarding the construction of the biosparge well are documented in the report titled *Horizontal Biosparge Well and Soil Vapor Monitoring Probe Completion Report* (CH2M, 2015).

Southeastern Area (currently operative): A second horizontal biosparge well (BS-02) was installed in the southeastern area of the site in November 2017. The design of the second biosparge well is similar to BS-01, the south-central biosparge well, consisting of 4-inch-diameter Schedule 80 PVC

casing and screen completed to a vertical depth of approximately 45 feet bgs. The lateral distance of the screen interval is 240 feet centered below the southeastern area hydrocarbon plume. A construction completion report documenting construction activities and specifications was submitted on July 12, 2018 (Jacobs, 2018). The 500-scfm sparge compressor was turned off temporarily and a new air sparge compressor (883 scfm) was installed in the fourth quarter 2018 to deliver ambient air to both the south-central and southeastern sparge wells. The 500-scfm and 883-scfm compressors are appropriately sized to deliver ambient air to both the south-central and southeastern sparge wells, and to allow for future system expansion.

Offsite/South-Central Area (currently inoperative): A new horizontal biosparge well (BS-03) was installed in the offsite/south-central area in December 2019. The biosparge well is constructed of 4-inch-diameter Schedule 80 PVC casing and screen, and completed to a depth of approximately 45 feet bgs. The length of the BS-03 well screen is 500 feet and the total length of the well is 770 feet. BS-03 is centered below the offsite/south-central area hydrocarbon plume. A construction completion report documenting construction activities and specifications was submitted to the Water Board in June 2020 (Jacobs, 2020).

BS-01 currently remains offline as part of the NSZD pilot study. BS-02 was turned on in May 2020 and is currently operating at a flow of 180 scfm. BS-03 is currently inoperative and is expected to be turned on in early-2021 after it is connected to the treatment system.

A summary of GWTS operations during the reporting period is presented in the sections that follow. Operations of the SVE and biosparge systems are presented separately in quarterly remediation progress reports that are provided to the Water Board and Norwalk Restoration Advisory Board.

Summary of Quarterly Groundwater Treatment System Operations

A total of 585,308 gallons of groundwater was extracted from the offsite/south-central area and southeastern area, treated, and discharged to Coyote Creek during the fourth quarter 2020. Wells that were in operation included GMW-O-20, GMW-O-21, GMW-O-23, and MW-O-2 in the offsite/south-central area, and GMW-O-15 GMW-O-18, and GMW-36 in the southeastern area. Table 1 summarizes the average daily flow rate during the reporting period. The GWTS operated throughout the quarter, with the following exceptions:

- From October 2 to 7, 2020, the GWTS was shut down for electrical safety concerns. The electrical items were repaired, and the GWTS was restarted on October 8, 2020.
- On October 30, 2020, the GWTS was shut down for the semiannual groundwater monitoring event. The GWTS was restarted on November 18, 2020. The system operated briefly on November 5, 11, and 14, 2020 for maintenance purposes.

No free product accumulated in the product holding tank of the GWTS during the fourth quarter of 2020. Hand bailing of free product (from wells not equipped for TFE) was not performed during this reporting period.

Routine Effluent Monitoring

During the fourth quarter 2020, effluent water samples were collected pursuant to the Waste Discharge Requirements (WDRs) under Order No. R4-2016-0309. Samples were collected at the

Order-designated monitoring point EFF-001 (Remediation System Effluent) for monthly and quarterly analyses.

Summary of Compliance Results

Monthly and Quarterly Sampling

Effluent daily flow rates are presented in Table 1. All daily flows were below the permit maximum discharge limit of 150,000 gallons per day. Analytical results for the October, November, and December 2020 effluent sampling events are summarized in Table 2. The effluent samples (EFF-001) were collected after the secondary polishing LGAC vessel, prior to discharge into the storm drain at the site. The results were compared with the maximum daily and average monthly discharge limits under Order No. R4-2016-0309. As shown in Table 2, all discharge limits for the treatment system effluent were met during the reporting period. Laboratory analytical reports and chain-of-custody documents are included in Attachment A. The mass emission (in pounds per day) is calculated by multiplying the daily effluent flow measured during the day of the sampling event (in million gallons per day) by the concentration of the analyte (milligrams per liter) and the conversion factor of 8.34, as required by the discharge permit. If the analyte was not detected in the sample, the concentration used is half of the method detection limit. Table 2 summarizes laboratory analytical results. A data quality assurance/quality control evaluation conducted by Jacobs is included in Attachment B.

Under NPDES Order No. R4-2016-0306, a wet weather condition is present when the maximum daily flow in Coyote Creek is equal to or greater than 156 cubic feet per second (cfs) as measured at the Los Angeles County Department of Public Works flow gauge station F354-R, located at the bottom of the creek just above the Long Beach Water Reclamation Plant. The daily flow rate in Coyote Creek, which is based on data from the Los Angeles County Department of Public Works flow gauge station F354-R, is presented in Table 3. Based on these data, the fourth quarter 2020 sampling events (with maximum daily flows of 151 cfs) occurred during dry weather conditions, and, are therefore, compared to the dry weather discharge limits.

Toxicity Sampling

Effluent samples from station EFF-001 were collected for chronic toxicity testing on October 26, 28, and 29, 2020. The salinity measured at the effluent sample point (EFF-001) was 0.9, 1.0, and 1.1 part per thousand [ppt]). Salinity downstream of the discharge point in Coyote Creek was measured on October 22, 2020 at 0.7 ppt. Therefore, the test species used for the chronic toxicity tests was fathead minnow (a freshwater organism). The toxicity tests were performed on the effluent samples according to U.S. Environmental Protection Agency's (EPA's) *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA, 2002a). Results were evaluated with EPA's *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* to determine a "pass" or "fail" and percent effect (EPA, 2010b). The laboratory results of the fourth quarter 2020 passed the survival test and are summarized in Table 4.

Waste Handling

On November 5, 2020, approximately 125 pounds of non-Resource Conservation and Recovery Act (RCRA) hazardous waste (GWTS bag filters) were removed from the site by Clean Harbors Services

of 508 East E Street, Unit A, Wilmington, California 90744. The waste was transported to Clean Harbors Grassy Mountain LLC., 3 miles east, 7 miles north of Knolls Grantsville, Utah 84029.

A copy of the waste manifest is included in Attachment C.

Harbor Toxics Total Maximum Daily Load Monitoring

Water and sediment chemistry monitoring and sampling for toxic pollutants in the Dominguez Channel and the Greater Los Angeles and Long Beach Harbor Waters total maximum daily load (TMDL) (also referred to as the Harbor Toxics TMDL) were conducted on March 13, April 7, and September 30, 2020. The March and April events were conducted during wet weather conditions, and the September event was conducted during dry weather conditions.

The Harbor Toxics TMDL summaries for 2020 are presented in Tables 5 and 6. The samples were shipped to Eurofins Calscience in Irvine, California, for analysis. Samples were also analyzed by Eurofins Calscience, LLC, in Garden Grove, California. The samples were analyzed in accordance with current EPA methods or as specified in the WDRs for the site. The laboratory reports are included in Attachment A.

References

California Regional Water Quality Control Board, Los Angeles Region (Water Board). 2020. *Comments on the Biosparging Effectiveness Evaluation and Recommendations, South-Central Area (Report), 15306 Norwalk Boulevard, Norwalk (SLIC No. 0286A, DOD No. 16638).* April 8.

CH2M HILL Engineers Inc. (CH2M, now Jacobs). 2015. *Horizontal Biosparge Well and Soil Vapor Monitoring Probe Completion Report, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California.* February 18.

Jacobs Engineering Group Inc. (Jacobs). 2018. *Southeastern Horizontal Biosparge Well (BS-02) Completion Report, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California.* July 12.

Jacobs Engineering Group Inc. (Jacobs). 2019. *Natural Source Zone Depletion Work Plan, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California.* July 2.

Jacobs Engineering Group Inc. (Jacobs). 2020. *Offsite South-Central Horizontal Biosparge and Soil Vapor Extraction Well Installation Completion Report, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California.* June 26.

U.S. Environmental Protection Agency (EPA). 2002a. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition. EPA 821/R-02/013. October.

U.S. Environmental Protection Agency (EPA). 2010b. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. EPA 833-R-10-003. June.

Jacobs

February 15, 2021
Subject: Effluent Monitoring Report, October 1 to December 31, 2020 (Fourth Quarter 2020)

Should you require any further information, please contact Nils Orliczky/Jacobs at (949) 224-7500.

Yours sincerely

Nils Orliczky
Environmental Engineer

Attachments:

Table 1 – Effluent Flow Rate Measurements, Fourth Quarter 2020
Table 2 – NPDES Effluent Monitoring, Fourth Quarter 2020
Table 3 – Maximum Daily Flow in Coyote Creek, Fourth Quarter 2020
Table 4 – NPDES Effluent Chronic Toxicity Monitoring, Fourth Quarter 2020
Table 5 – Harbor Toxics TMDL Water Chemistry Analytical Summary
Table 6 – Harbor Toxics TMDL Sediment Chemistry Analytical Summary

Figure 1 – Site Location Map
Figure 2 – Remediation System Layout

Attachment A – Laboratory Analytical Reports and Chain-of-Custody Documents
Attachment B – Data Quality Assurance/Quality Control
Attachment C – Waste Manifest

Tables

Table 1. Effluent Flow Rate Measurements, Fourth Quarter 2020

SFPP Norwalk Pump Station, Norwalk, California

Date	Daily Flow Rate (gpd) (Maximum Daily Discharge Limit = 150,000 gpd[a])
10/01/20	5,456
10/02/20	840
10/03/20	12
10/04/20	8
10/05/20	0
10/06/20	0
10/07/20	988
10/08/20	404
10/09/20	4,976
10/10/20	5,320
10/11/20	5,284
10/12/20	5,312
10/13/20	4,828
10/14/20	5,592
10/15/20	4,828
10/16/20	2,968
10/17/20	1,616
10/18/20	4,020
10/19/20	2,576
10/20/20	4,224
10/21/20	2,400
10/22/20	2,572
10/23/20	2,948
10/24/20	4,764
10/25/20	5,568
10/26/20	4,724
10/27/20	4,736
10/28/20	3,704
10/29/20	3,916
10/30/20	2,620
10/31/20	0
11/01/20	16
11/02/20	0
11/03/20	0
11/04/20	0
11/05/20	272
11/06/20	0
11/07/20	0
11/08/20	0
11/09/20	0
11/10/20	0
11/11/20	172
11/12/20	0
11/13/20	0
11/14/20	256
11/15/20	0
11/16/20	0
11/17/20	0

Table 1. Effluent Flow Rate Measurements, Fourth Quarter 2020

SFPP Norwalk Pump Station, Norwalk, California

Date	Daily Flow Rate (gpd) (Maximum Daily Discharge Limit = 150,000 gpd[a])
11/18/20	1,012
11/19/20	1,032
11/20/20	8,752
11/21/20	11,304
11/22/20	10,768
11/23/20	10,580
11/24/20	10,848
11/25/20	11,468
11/26/20	10,968
11/27/20	10,568
11/28/20	10,368
11/29/20	10,216
11/30/20	10,588
12/01/20	7,688
12/02/20	4,620
12/03/20	14,520
12/04/20	5,196
12/05/20	12,956
12/06/20	12,452
12/07/20	13,588
12/08/20	17,360
12/09/20	13,752
12/10/20	2,452
12/11/20	13,916
12/12/20	3,136
12/13/20	13,356
12/14/20	13,408
12/15/20	13,284
12/16/20	13,588
12/17/20	13,288
12/18/20	13,616
12/19/20	13,580
12/20/20	13,412
12/21/20	13,436
12/22/20	13,420
12/23/20	12,784
12/24/20	12,780
12/25/20	12,856
12/26/20	12,784
12/27/20	11,964
12/28/20	12,572
12/29/20	12,920
12/30/20	12,244
12/31/20	11,988

Notes:

[a] California Regional Water Quality Control Board Waste Discharge Requirements.

gpd = gallons per day

Table 2. NPDES Effluent Monitoring, Fourth Quarter 2020

SFPP Norwalk Pump Station, Norwalk, California

Analyte	Sampling Frequency	Analytical Method	Units	MDL[a]	RL[a]	ML[b]	10/27/20	11/23/20	12/8/20	Discharge Limits[c]	
										Monthly Average	Daily Maximum
Flow	Daily	--	gpd	--	--	--	**4,736**	**10,580**	**17,360**	--	**150,000**
TPH as Gasoline (C4-C12)	Monthly	EPA 8015B	µg/L	21	50	NE	<40[d]	<58[d]	<42[d]	--	--
TPH as Diesel (C13-C22)	Monthly	EPA 8015B	µg/L	16	26	NE	<16	<15	20 J	--	--
TPH as Oil (C23+)	Monthly	EPA 8015B	µg/L	14	26	NE	<22[d]	<17[d]	<29[d]	--	--
Total TPH	Monthly	EPA 8015B	µg/L	21	100	NE	<62[d]	<75[d]	20 J[e]	--	**100**
Total TPH	Monthly	Calculated	lb/day	--	--	--	**0.001224**	**0.003309**	**0.002896**	--	**0.13**
Benzene	Monthly	EPA 8260B	µg/L	0.11	1.0	2.0	<0.11	<0.11	<0.11	--	--
1,1-Dichloroethane	Monthly	EPA 8260B	µg/L	0.22	0.5	1.0	<0.22	<0.22	<0.22	--	--
1,2-Dichloroethane	Monthly	EPA 8260B	µg/L	0.16	0.5	2.0	<0.16	<0.16	<0.16	--	--
Ethylbenzene	Monthly	EPA 8260B	µg/L	0.11	1.0	2.0	<0.11	<0.11	<0.11	--	--
Phenol	Monthly	EPA 8270C	µg/L	0.33	1	1	<0.33	<0.33	<0.33	--	--
Toluene	Monthly	EPA 8260B	µg/L	0.13	2.0	2.0	<0.13	<0.13	<0.13	--	--
Methyl Tertiary Butyl Ether	Monthly	EPA 8260B	µg/L	0.44	1.0	NE	<0.44	<0.44	<0.44	--	--
Tertiary Butyl Alcohol	Monthly	EPA 8260B	µg/L	2.8	5.0	NE	<2.8	<2.8	<2.8	--	--
Total Xylenes	Monthly	EPA 8260B	µg/L	1.5	2.0	NE	<1.5	<1.5	<1.5	--	--
Copper (total recoverable) (dry weather)	Monthly	EPA 200.8	µg/L	0.26	0.5	0.5	<0.26	<0.26	<0.26	**9.7**	**32**
Copper (total recoverable) (dry weather)	Monthly	Calculated	lb/day	--	--	--	**0.000005**	**0.000011**	**0.000019**	**0.012**	**0.04**
Copper (total recoverable) (wet weather)	Monthly	EPA 200.8	µg/L	0.26	0.5	0.5	<0.26	<0.26	<0.26	**8.3**	**27**
Copper (total recoverable) (wet weather)	Monthly	Calculated	lb/day	--	--	--	**0.000005**	**0.000011**	**0.000019**	**0.010**	**0.034**
Lead (total recoverable) (wet weather)	Monthly	EPA 200.8	µg/L	0.13	0.5	0.5	<0.13	<0.13	<0.13	**33**	**106**
Lead (total recoverable) (wet weather)	Monthly	Calculated	lb/day	--	--	--	**0.000003**	**0.000006**	**0.000009**	**0.041**	**0.13**
Mercury (total recoverable)	Monthly	EPA 245.1	µg/L	0.018	0.05	0.2	<0.018	<0.018	<0.018	**0.051**	**0.10**
Mercury (total recoverable)	Monthly	Calculated	lb/day	--	--	--	0	0.000001	0.000001	**0.000064**	**0.00013**
Zinc (total recoverable) (dry weather)	Monthly	EPA 200.8	µg/L	0.27	1.0	1.0	**4.7**	**1.4**	**2.3**	**64**	**220**
Zinc (total recoverable) (dry weather)	Monthly	Calculated	lb/day	--	--	--	**0.000186**	**0.000124**	**0.000333**	**0.080**	**0.28**
Zinc (total recoverable) (wet weather)	Monthly	EPA 200.8	µg/L	0.27	1.0	1.0	**4.7**	**1.4**	**2.3**	**46**	**158**
Zinc (total recoverable) (wet weather)	Monthly	Calculated	lb/day	--	--	--	**0.000186**	**0.000124**	**0.000333**	**0.058**	**0.2**
Biochemical Oxygen Demand	Quarterly	SM 5210B	mg/L	1.5	1.5	NE	--	--	2.4	**20**	**30**
Biochemical Oxygen Demand	Quarterly	Calculated	lb/day	--	--	--	--	--	**0.347478**	**25**	**38**
Total Suspended Solids	Quarterly	SM 2540D	mg/L	5.0	5.0	NE	--	--	<5	**50**	**75**
Total Suspended Solids	Quarterly	Calculated	lb/day	--	--	--	--	--	**0.361956**	**63**	**94**
pH	Quarterly	Field Measurement	s.u.	0.1	0.1	NE	--	--	**6.9**	--	**6.5/8.5**
Oil and Grease	Quarterly	EPA 1664A	mg/L	0.57	4	NE	--	--	**1 J**	**10**	**15**
Oil and Grease	Quarterly	Calculated	lb/day	--	--	--	--	--	**0.144782**	**13**	**19**
Ammonia Nitrogen (as N)	Quarterly	EPA 350.1	mg/L	0.067	0.2	NE	--	--	**0.13 J**	--	--
Settleable Solids	Quarterly	SM 2540F	mL/L/hr	0.1	0.1	NE	--	--	<0.1	**0.1**	**0.3**
Temperature	Quarterly	Temperature	°F	0.1	0.1	NE	--	--	**68.2**	--	**86**
Turbidity	Quarterly	SM 2130B	NTU	0.1	0.1	NE	--	--	**0.29**	**50**	**75**
Salinity	2x/year	Field Measurement	ppt	--	--	NE	**0.9**	--	--	--	--
Chronic Toxicity	2x/year	--	--	--	--	NE	**Pass**	--	--	**Pass**	**Pass and % Effect <50**

Table 2. NPDES Effluent Monitoring, Fourth Quarter 2020

SFPP Norwalk Pump Station, Norwalk, California

Analyte	Sampling Frequency	Analytical Method	Units	MDL[a]	RL[a]	ML[b]	10/27/20	11/23/20	12/8/20	Discharge Limits[c]	
										Monthly Average	Daily Maximum
Di-isopropyl Ether	Annually	EPA 8260B	µg/L	--	--	NE	--	--	--	--	--
Methyl Ethyl Ketone	Annually	EPA 8260B	µg/L	--	--	NE	--	--	--	--	--
Methylene Blue Active Substances	Annually	SM 5540C	mg/L	--	--	NE	--	--	--	--	--
Nitrate + Nitrite as N	Annually	EPA 300.0	mg/L	--	--	NE	--	--	--	--	--
Sulfides	Annually	SM 4500 SD	mg/L	--	--	NE	--	--	--	--	--
Tert Amyl Methyl Ether	Annually	EPA 8260B	µg/L	--	--	NE	--	--	--	--	--
TCDD Equivalents	Annually	EPA 8290	pg/L	--	--	NE	--	--	--	--	--
Other Priority Pollutants	Annually	--	--	--	--	--	--	--	--	--	--

Notes:

[a] The highest MDL and RL during this reporting period are shown.

[b] ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. It is also the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes, and processing steps have been

[c] California Regional Water Quality Control Board Waste Discharge Requirements (WDRs) under Order No. R4-2016-0309.

[d] TPH data were qualified as nondetect due to associated blank contamination.

[e] Total TPH value was reduced because TPH-gasoline and TPH-oil results qualified as nondetect due to associated method blank contamination.

-- = not measured or not analyzed

< = not detected above the MDL

° F = degrees Fahrenheit

µg/L = micrograms per liter

DNQ = detected, but not quantified; result is greater than or equal to the laboratory MDL but less than the ML (or RL if no ML is listed)

EPA = U.S. Environmental Protection Agency

gpd = gallons per day

GWTS = groundwater treatment system

J = detected at a concentration below the RL and above the MDL; reported value is estimated

lb/day = pounds per day

MDL = laboratory method detection limit

mg/L = milligrams per liter

ML = minimum level (see note b)

mL/L/hr = milliliters per liter per hour

NE = not established

NPDES = National Pollutant Discharge Elimination System

NS = not sampled. GWTS was down since November 11, 2019. On May 15, 2020, the GWTS was restarted after the baseline NSZD sampling and semiannual groundwater monitoring event were completed.

NSZD = natural source zone depletion

NTU = nephelometric turbidity unit(s)

pg/L = picograms per liter

ppt = parts per thousand

RL = laboratory reporting limit

s.u. = standard unit(s)

TCDD = tetrachlorodibenzodioxin

TPH = total petroleum hydrocarbons

Table 3. Maximum Daily Flow in Coyote Creek, Fourth Quarter 2020

SFPP Norwalk Pump Station, Norwalk, California

Date	Maximum Daily Flow Rate (cfs)[a]	Comments
10/01/20	5.5	
10/02/20	4.81	
10/03/20	3.86	
10/04/20	4.48	
10/05/20	4.81	
10/06/20	9.02	
10/07/20	4.81	
10/08/20	4.16	
10/09/20	5.5	
10/10/20	6.55	
10/11/20	6.55	
10/12/20	4.81	
10/13/20	4.81	
10/14/20	5.5	
10/15/20	6.01	
10/16/20	5.15	
10/17/20	4.48	
10/18/20	4.81	
10/19/20	7.72	
10/20/20	4.81	
10/21/20	7.12	
10/22/20	11.2	
10/23/20	10.4	
10/24/20	5.15	
10/25/20	6.55	
10/26/20	4.81	
10/27/20	4.81	Monthly effluent sample
10/28/20	4.16	
10/29/20	4.81	
10/30/20	4.48	
10/31/20	6.01	
11/01/20	6.01	
11/02/20	4.81	
11/03/20	4.48	
11/04/20	4.2	
11/05/20	6.01	
11/06/20	4.81	
11/07/20	327	
11/08/20	20.5	
11/09/20	6.01	
11/10/20	4.81	
11/11/20	5.15	
11/12/20	5.15	
11/13/20	4.16	
11/14/20	3.86	
11/15/20	3.86	
11/16/20	6.55	
11/17/20	8.35	
11/18/20	6.55	
11/19/20	6.01	
11/20/20	4.81	

Table 3. Maximum Daily Flow in Coyote Creek, Fourth Quarter 2020

SFPP Norwalk Pump Station, Norwalk, California

Date	Maximum Daily Flow Rate (cfs)[a]	Comments
11/21/20	4.81	
11/22/20	4.48	
11/23/20	11.2	Monthly effluent sample
11/24/20	12	
11/25/20	6.01	
11/26/20	7.12	
11/27/20	5.15	
11/28/20	4.16	
11/29/20	4.48	
11/30/20	6.01	
12/01/20	5.15	
12/02/20	5.50	
12/03/20	6.01	
12/04/20	5.15	
12/05/20	6.01	
12/06/20	6.01	
12/07/20	8.35	
12/08/20	9.02	Quarterly effluent sample
12/09/20	27.90	
12/10/20	9.02	
12/11/20	8.35	
12/12/20	12.00	
12/13/20	9.02	
12/14/20	8.35	
12/15/20	9.71	
12/16/20	8.35	
12/17/20	15.30	
12/18/20	11.20	
12/19/20	10.40	
12/20/20	11.20	
12/21/20	10.40	
12/22/20	15.30	
12/23/20	20.50	
12/24/20	16.50	
12/25/20	10.40	
12/26/20	9.71	
12/27/20	10.40	
12/28/20	5,630	
12/29/20	447.0	
12/30/20	10.4	
12/31/20	8.4	

Notes:

[a] A wet weather event is any day when the maximum daily flow of Coyote Creek is greater than or equal to 156 cfs.

A dry weather event is any day when the maximum daily flow of Coyote Creek is less than 156 cfs.

cfs = cubic feet per second

Table 4. NPDES Effluent Chronic Toxicity Monitoring, Fourth Quarter 2020

SFPP Norwalk Pump Station, Norwalk, California

		Sampling Dates	10/26/2020, 10/28/2020, 10/29/2020
		Test Dates	10/17/2020 to 11/05/2020
		EFF-001 (Effluent)	
Test Organism	Toxicity Endpoint	% Effect	TST Result
Larva Fathead Minnows (Pimephales promelas)	Survival	-5.4	Pass
	Growth	-35.5	Pass

Notes:

The Maximum Daily Effluent Limitation (MDEL) for chronic toxicity is exceeded when a chronic toxicity test results in “Fail” and the “Percent Effect” is $\geq$50%.

Two additional effluent toxicity tests will be conducted within the same calendar month if the initial test results in a "Fail" to evaluate the Median Monthly Effluent Limit (MMEL).

A TIE (Toxicity Identification Evaluation) will be conducted on any effluent sample that causes a chronic result of "Fail" with an effect >50%.

Accelerated testing will be implemented if the MMEL result is a "Fail" or if a single effluent toxicity test results in a "Fail" with % effect >50%.

NPDES = National Pollutant Discharge Elimination System

TRE = toxicity reduction evaluation

TST = Test of Significant Toxicity (statistical analysis) per EPA 833-R-10-003 (EPA, 2010)

Table 5. Harbor Toxics TMDL Water Chemistry Analytical Summary

SFPP Norwalk Pump Station, Norwalk, California

Parameter Name	Analytical Method	Report Units	Target MDL	03/13/2020[1,2]				04/07/2020[1,3]				09/30/2020[4]		
				SG1-031320	SG1-031320-DD	SG1-031320-DW	SG1-031320-EB	SG1-040720	SG1-040720-DD	SG1-040720-DW	SG1-040720-EB	SG1-093020-DD	SG1-093020-DW	SG1-093020-EB
Suspended Solids (Residue, Non-Filterable)	A2540D	mg/L	1	26	17	18	<0.5	11	10	9.7	<0.5	5.2	12	<0.5
Copper	E200.8	ug/L	10	5.3	6.1	5.4	0.6	<10	<10	<10	<0.5	<10	<10	<10
Lead	E200.8	ug/L	10	<2.5	<2.5	<2.5	<0.5	<10	<10	<10	<0.5	<10	<10	<10
Zinc	E200.8	ug/L	50	34	39	35	6.9	<50	<50	<50	3.3	<50	<50	<50
2,4'-DDT	SW8081A	ug/L	0.019	<0.019	<0.019	<0.019	<0.019	<0.0023	<0.0023	<0.0023	<0.0024	<0.0016	<0.0016	<0.0017
4,4'-DDT	SW8081A	ug/L	0.0052	<0.0038	<0.0038	<0.0038	<0.0038	<0.0023	<0.0023	<0.0023	<0.0024	<0.0048	<0.0049	<0.0052
Total DDT (2,4-DDT + 4,4-DDT)	SW8081A	ug/L	0.019	<0.019	<0.019	<0.019	<0.019	<0.0023	<0.0023	<0.0023	<0.0024	<0.0016	<0.0016	<0.0017
1-Methyl naphthalene	SW8270C SIM	ug/L	0.011	<0.01	<0.01	0.011 J	<0.01	0.011 J	<0.0098	0.025 J	<0.01	<0.01	<0.011	<0.01
2-Methyl naphthalene	SW8270C SIM	ug/L	0.013	<0.013	<0.013	<0.013	<0.013	0.016 J	<0.012	0.035 J	<0.013	<0.013	<0.013	<0.013
Acenaphthene	SW8270C SIM	ug/L	0.014	<0.013	0.014 J	<0.013	<0.013	<0.013	<0.012	<0.013	<0.013	<0.013	<0.014	<0.013
Acenaphthylene	SW8270C SIM	ug/L	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.011	<0.01
Anthracene	SW8270C SIM	ug/L	0.015	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.015	<0.014
Benzo(a)anthracene	SW8270C SIM	ug/L	0.013	<0.013	<0.012	<0.012	<0.013	<0.012	<0.012	<0.012	<0.012	<0.013	<0.013	<0.013
Benzo(a)pyrene	SW8270C SIM	ug/L	0.019	<0.018	<0.018	<0.018	<0.018	<0.017	<0.017	<0.017	<0.018	<0.018	<0.019	<0.018
Benzo(b)fluoranthene	SW8270C SIM	ug/L	0.023	<0.022	<0.021	<0.021	<0.022	<0.021	<0.021	<0.021	<0.022	<0.022	<0.023	<0.022
Benzo(g,h,i)perylene	SW8270C SIM	ug/L	0.022	<0.02	<0.02	<0.02	<0.021	<0.02	<0.02	<0.02	<0.02	<0.021	<0.022	<0.021
Benzo(k)fluoranthene	SW8270C SIM	ug/L	0.011	<0.01	<0.01	<0.01	<0.01	<0.0099	<0.0098	<0.0098	<0.01	<0.01	<0.011	<0.01
Chrysene	SW8270C SIM	ug/L	0.023	<0.022	<0.022	<0.022	<0.022	<0.021	<0.021	<0.021	<0.022	<0.022	<0.023	<0.022
Decachlorobiphenyl	SW8270C SIM	ug/L	0.0015	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0015	<0.0012	<0.0012
Dibenzo(a,h)anthracene	SW8270C SIM	ug/L	0.018	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.018	<0.017
Fluoranthene	SW8270C SIM	ug/L	0.015	0.014 J	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.015	<0.014
Fluorene	SW8270C SIM	ug/L	0.013	<0.012	0.018 J	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.013	<0.012
Indeno[1,2,3-cd]pyrene	SW8270C SIM	ug/L	0.022	<0.021	<0.021	<0.021	<0.021	<0.021	<0.02	<0.02	<0.021	<0.021	<0.022	<0.021
Naphthalene	SW8270C SIM	ug/L	0.014	0.015 J	0.023 J	<0.013	<0.013	<0.013	<0.013	0.026 J	<0.013	<0.013	<0.014	<0.013
Phenanthrene	SW8270C SIM	ug/L	0.0052	0.014 J	0.012 J	0.012 J	<0.0049	0.0057 J	<0.0048	<0.0048	<0.0049	<0.005	<0.0052	<0.0049
Pyrene	SW8270C SIM	ug/L	0.013	0.015 J	0.015 J	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.013	<0.012
Total PCBs	SW8270C SIM	ug/L	--	0.038	0.038	0.038	0.038	0.0377	0.0377	0.038	0.038	0.046	0.038	0.038

Notes:

TMDL = total maximum daily load

< = not detected above the MDL

MDL = laboratory method detection limit

mg/L = milligrams per liter

µg/L = micrograms per liter

1 = samples collected on 3/13/20 and 4/7/20 were collected during wet weather events

2 = Coyote Creek station F354-R maximum flow was approximately 3,450 cubic feet per second

3 = Coyote Creek station F354-R maximum flow was approximately 2,150 cubic feet per second

4 = Coyote Creek station F354-R maximum flow was approximately 15.3 cubic feet per second

SG1 = location 1

WD = wet weather duplicate water sample

WW = wet weather water sample

DD = dry weather duplicate water sample

DW = dry weather water sample

EB = equipment blank

EPA = U.S. Environmental Protection Agency

DDT = dichlorodiphenyltrichloroethane

PCB = polychlorinated biphenyl

Table 6. Harbor Toxics TMDL Sediment Chemistry Analytical Summary

SFPP Norwalk Pump Station, Norwalk, California

Parameter Name	Analytical Method	Report Units	Target MDL	3/13/2020			
				SG1-03132020-SS	SG1-03132020-SD	SG1-03132020	SG1-03132020-SS-EB
Cadmium	6020	mg/Kg	0.25	<0.25	<0.25	<0.25	0.30 ug/L
Copper	6020	mg/Kg	0.49	3.7	4.0	3.6	1.2 B ug/L
Lead	6020	mg/Kg	0.25	3.2	3.5	3.3	0.37 ug/L
Nickel	6020	mg/Kg	0.49	2.2	2.4	2.4	2.2 B ug/L
Mercury	7471A	mg/Kg	0.012	<0.012	0.016 J	<0.012	<0.10 ug/L
Zinc	6020	mg/Kg	4.9	16	19	16	14 B ug/L
Aldrin	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0014 ug/L
alpha-BHC	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0024 ug.L
beta-BHC	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0038 ug/L
Chlordane (technical)	8081A	ug/Kg	--	<15	<15	<15	<0.076 ug/L
Dieldrin	8081A	ug/Kg	0.50	<0.50	<0.50	<0.50	<0.0019 ug/L
delta-BHC	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0033 ug/L
4,4'-DDD	8081A	ug/Kg	0.421	<0.50	<0.50	<0.50	<0.0038 ug/L
4,4'-DDE	8081A	ug/Kg	0.248	<0.50	<0.50	<0.50	<0.0028 ug/L
4,4,'DDT	8081A	ug/Kg	0.222	<0.50	<0.50	<0.50	<0.0038 ug/L
Endosulfan I	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0028 ug/L
Endosulfan II	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0019 ug/L
Endosulfan Sulfate	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0028 ug/L
Endrin	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0019 ug/L
Endrin Aldehyde	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0019 ug/L
Endrin Ketone	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0066 ug/L
gamma-BHC (Lindane)	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0028 ug/L
Heptachlor	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0028 ug/L
Heptachlor Epoxide	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0024 ug/L
Methoxychlor	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.0033 ug/L
Toxaphene	8081A	ug/Kg	--	<20	<20	<20	<0.24 ug/L
trans-Chlordane	8081A	ug/Kg	--	<0.50	<0.50	<0.50	<0.028 ug/L
1-methylnaphthalene	8270C SIM	ug/Kg	1.5	<1.5	<1.4	<1.4	<0.010 ug/L
2-methylnaphthalene	8270C SIM	ug/Kg	1.5	<1.5	<1.4	<1.4	<0.013 ug/L
acenaphthene	8270C SIM	ug/Kg	1.0	<1.0	<1.0	<1.0	<0.013 ug/L
anthracene	8270C SIM	ug/Kg	1.4	<1.0	<1.3	<1.3	<0.014 ug/L
benz(a)anthracene	8270C SIM	ug/Kg	2.2	4.8 J	<2.2	12 J	<0.013 ug/L
benzo(a)pyrene	8270C SIM	ug/Kg	2.7	7.9 J	<2.7	19 J	<0.018 ug/L
chrysene	8270C SIM	ug/Kg	1.6	4.1 J	<1.6	19 J	<0.022 ug/L
dibenz(a,h)anthracene	8270C SIM	ug/Kg	2.2	4.4 J*1	<2.1 *1	7.8 J*1	<0.018 ug/L
fluoranthene	8270C SIM	ug/Kg	2.0	3.9 J	<1.9	17 J F2	<0.014 ug/L
fluorene	8270C SIM	ug/Kg	1.7	<1.7	<1.7	<1.7	<0.013 ug/L
naphthalene	8270C SIM	ug/Kg	1.6	<1.6	<1.6	1.6 J	<0.014 ug/L
phenanthrene	8270C SIM	ug/Kg	1.7	<1.7	<1.7	3.6 J	0.059 J ug/L
perylene, Benzo [g,h,i]	8270C SIM	--	--	--	--	--	<0.021 ug/L
pyrene	8270C SIM	ug/Kg	1.5	3.6 J	<1.5	17 J	0.026 J ug/L
PCB-8	8270C SIM	ug/Kg	0.00439	<0.077	<0.076	<0.077	<0.00049 ug/L
PCB-18	8270C SIM	ug/Kg	0.025	<0.065	<0.064	<0.065	<0.00044 ug/L

Table 6. Harbor Toxics TMDL Sediment Chemistry Analytical Summary

SFPP Norwalk Pump Station, Norwalk, California

Parameter Name	Analytical Method	Report Units	Target MDL	3/13/2020			
				SG1-03132020-SS	SG1-03132020-SD	SG1-03132020	SG1-03132020-SS-EB
PCB-28	8270C SIM	ug/Kg	0.02087	<0.069	<0.069	<0.069	<0.00050 ug/L
PCB-44	8270C SIM	ug/Kg	0.01437	<0.15	<0.15	<0.15	<0.00068 ug/L
PCB-52	8270C SIM	ug/Kg	0.01817	<0.19	<0.19	<0.19	<0.00053 ug/L
PCB-66	8270C SIM	ug/Kg	0.0105	<0.12	<0.12	<0.12	<0.00038 ug/L
PCB-101	8270C SIM	ug/Kg	0.0144	<0.044	<0.044	<0.044	<0.00047 ug/L
PCB-105	8270C SIM	ug/Kg	0.00389	<0.053	<0.053	<0.053	<0.00045 ug/L
PCB-118	8270C SIM	ug/Kg	0.00946	<0.035	<0.034	<0.035	<0.00048 ug/L
PCB-128	8270C SIM	ug/Kg	0.0068	<0.12	<0.12	<0.12	<0.00041 ug/L
PCB-138	8270C SIM	ug/Kg	0.0273	<0.35	<0.35	<0.35	<0.00057 ug/L
PCB-153	8270C SIM	ug/Kg	0.0129	<0.16	<0.16	<0.16	<0.00066 ug/L
PCB-170	8270C SIM	ug/Kg	0.00596	<0.11	<0.11	<0.11	<0.00040 ug/L
PCB-180	8270C SIM	ug/Kg	0.00746	<0.092	<0.091	<0.092	<0.00058 ug/L
PCB-187	8270C SIM	ug/Kg	0.01	<0.10	<0.10	<0.10	<0.00041 ug/L
PCB-195	8270C SIM	ug/Kg	0.0065	<0.060	<0.059	<0.060	<0.00071 ug/L
PCB-206	8270C SIM	ug/Kg	0.00779	<0.12	<0.11	<0.12	<0.000041 ug/L
decachlorobiphenyl	8270C SIM	ug/Kg	0.061	<0.061	<0.061	<0.061	<0.0012 ug/L
Total Organic Carbon	9060A	mg/Kg	40	670	1,700	810	<0.65 mg/L
Course Sand (0.5mm)	D422-Grain Size	%	--	26.6	--	--	--
Fine Sand (0.125mm)	D422-Grain Size	%	--	2.0	--	--	--
Gravel (2mm)	D422-Grain Size	%	--	<0.01	--	--	--
Medium Sand (0.25mm)	D422-Grain Size	%	--	70.0	--	--	--
Very Fine Sand (0.0625 mm)	D422-Grain Size	%	--	0.1	--	--	--
Total Silt and Clay (Bottom)	D422-Grain Size	%	--	0.06	--	--	--
Very Course Sand (1mm)	D422-Grain Size	%	--	1.0	--	--	--

Notes:
TMDL = total maximum daily load
< = not detected above the MDL
MDL = laboratory method detection limit
-- = not applicable
mg/Kg = milligrams per kilogram
ug/Kg = micrograms per kilogram
ug/L = micrograms per liter
SG1 = location 1
SD = Surficial Sediment Duplicate
SS = Surficial Sediment
SS-EB = Surficial Sediment Equipment Blank
J = detected at a concentration below the RL and above the MDL; reported value is estimated
EPA = U.S. Environmental Protection Agency
PCB = polychlorinated biphenyl
B = compound was detected in blank sample
*1 = LCS/LCSD RPD exceeds control limits.
F2 = MS/MSD RPD exceeds control limits

Figures

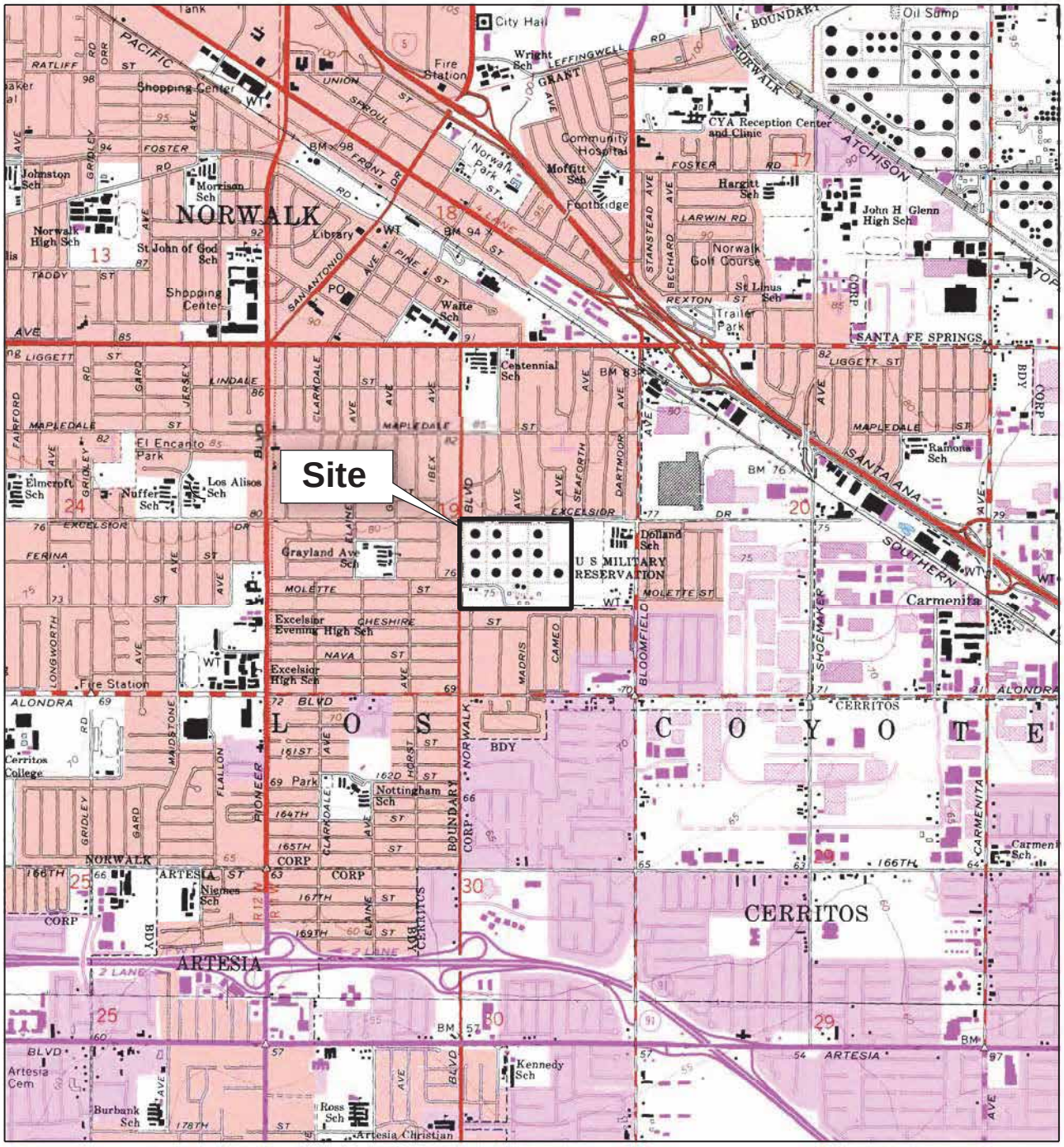
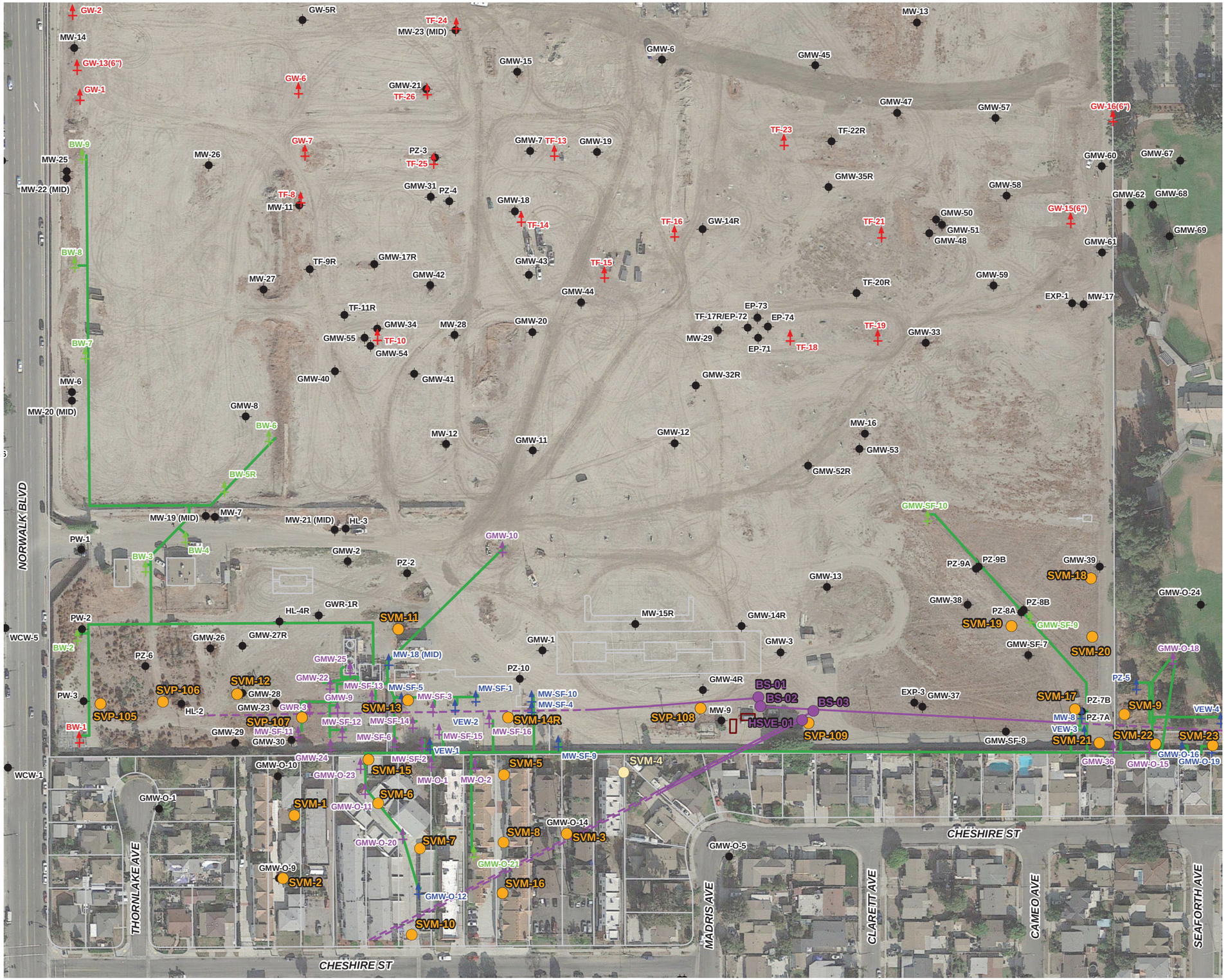


Figure 1. Site Location Map
SFPP Norwalk Pump Station
Norwalk, California

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.

Jacobs



LEGEND

- Soil Vapor Probe/Soil Vapor Monitoring Probe
- Destroyed Soil Vapor Probe/Soil Vapor Monitoring Probe
- Horizontal Biosparge Well Entry Point
- Existing Groundwater Monitoring Well
- Existing Remediation Well
- Kinder Morgan Combined Soil Vapor and Total Fluids Extraction Wells
- Kinder Morgan Soil Vapor Extraction Wells
- Kinder Morgan Total Fluids and/or Groundwater Extraction Wells
- Kinder Morgan Remediation Piping Layout (Above Ground and Below Ground)
- Horizontal Biosparge Well (Dashed Line Depicts Approximate Lateral Extent of Well Screen)
- Air Compressor System

Imagery Source:
Google Earth December 3, 2017.

N

0 75 150 300
Feet

1 inch = 150 feet

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

Jacobs

\\DC1VS01\GISPROJ\K\KINDERMORGAN\NORWALK\MAPFILES\2020\FIGURE_2_REMEDIATION_SYSTEM_LAYOUT.MXD AESPEJO 7/10/2020
FES0713201942SCO

Attachment A
Laboratory Analytical Reports and Chain-of-Custody Documents

October 30, 2020

Eric Davis
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

TEL:
FAX:

Workorder No.: N042772

RE: SFPP Norwalk

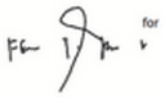
Attention: Eric Davis

Enclosed are the results for sample(s) received on October 27, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,



Nancy Sibucao
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 ASSET Laboratories - Las Vegas.

CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N042772

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

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

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

Samples were analyzed within method holding time.

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

CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N042772
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N042772-001A	EFF-102720	Water	10/27/2020 9:00:00 AM	10/27/2020	10/30/2020
N042772-001B	EFF-102720	Water	10/27/2020 9:00:00 AM	10/27/2020	10/30/2020
N042772-001C	EFF-102720	Water	10/27/2020 9:00:00 AM	10/27/2020	10/30/2020
N042772-001D	EFF-102720	Water	10/27/2020 9:00:00 AM	10/27/2020	10/30/2020
N042772-001E	EFF-102720	Water	10/27/2020 9:00:00 AM	10/27/2020	10/30/2020

CLIENT: CH2MHill
Lab Order: N042772
Project: SFPP Norwalk
Lab ID: N042772-001

Client Sample ID: EFF-102720
Collection Date: 10/27/2020 9:00:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **NV00922-MS9_201028A** QC Batch: **82774**				PrepDate:	**10/28/2020**		Analyst: **PL**
Phenol	ND	0.33	1.0		µg/L	1	10/28/2020 01:44 PM
Surr: Phenol-d5	25.0	0	25-108		%REC	1	10/28/2020 01:44 PM
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **CA01638-MS08_201028A** QC Batch: **R20VW015**				PrepDate:			Analyst: **AW**
1,1-Dichloroethane	ND	0.22	0.50		ug/L	1	10/28/2020 12:28 PM
1,2-Dichloroethane	ND	0.16	0.50		ug/L	1	10/28/2020 12:28 PM
Benzene	ND	0.11	1.0		ug/L	1	10/28/2020 12:28 PM
Ethylbenzene	ND	0.11	1.0		ug/L	1	10/28/2020 12:28 PM
m,p-Xylene	ND	0.23	1.0		ug/L	1	10/28/2020 12:28 PM
MTBE	ND	0.44	1.0		ug/L	1	10/28/2020 12:28 PM
o-Xylene	ND	0.087	1.0		ug/L	1	10/28/2020 12:28 PM
Tert-Butanol	ND	2.8	5.0		ug/L	1	10/28/2020 12:28 PM
Toluene	ND	0.13	2.0		ug/L	1	10/28/2020 12:28 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	10/28/2020 12:28 PM
Surr: 1,2-Dichloroethane-d4	99.8	0	72-119		%REC	1	10/28/2020 12:28 PM
Surr: 4-Bromofluorobenzene	97.6	0	76-119		%REC	1	10/28/2020 12:28 PM
Surr: Dibromofluoromethane	100	0	85-115		%REC	1	10/28/2020 12:28 PM
Surr: Toluene-d8	104	0	81-120		%REC	1	10/28/2020 12:28 PM
TPH EXTRACTABLE BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **NV00922-GC1_201027C** QC Batch: **82783**				PrepDate:	**10/28/2020**		Analyst: **PL**
TPH-Diesel (C13-C22)	ND	16	26		ug/L	1	10/29/2020 01:40 AM
TPH-Oil (C23-C36)	22	14	26	J	ug/L	1	10/29/2020 01:40 AM
Surr: Octacosane	89.4	0	26-152		%REC	1	10/29/2020 01:40 AM
Surr: p-Terphenyl	85.3	0	57-132		%REC	1	10/29/2020 01:40 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **NV00922-GC4_201028A** QC Batch: **E20VW106**				PrepDate:			Analyst: **BH**
TPH-Gasoline (C4-C12)	40	21	50	J	ug/L	1	10/28/2020 12:18 PM
Surr: Chlorobenzene - d5	111	0	74-138		%REC	1	10/28/2020 12:18 PM

Qualifiers:

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

CLIENT:	CH2MHill	**Client Sample ID:**	EFF-102720
Lab Order:	N042772	**Collection Date:**	10/27/2020 9:00:00 AM
Project:	SFPP Norwalk	**Matrix:**	WATER
Lab ID:	N042772-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA2_201028B** QC Batch: **82773**				PrepDate:	**10/28/2020**		Analyst: **DJ**
Mercury	ND	0.018	0.050		µg/L	1	10/28/2020 10:55 AM
TOTAL METALS BY ICPMS							
EPA 200.8							
RunID: **NV00922-ICP7_201029A** QC Batch: **82771**				PrepDate:	**10/28/2020**		Analyst: **CEI**
Copper	ND	0.26	0.50		µg/L	1	10/29/2020 02:59 PM
Lead	ND	0.13	0.50		µg/L	1	10/29/2020 02:59 PM
Zinc	4.7	0.27	1.0		µg/L	1	10/29/2020 02:59 PM
TOTAL TPH							
EPA 8015B							
RunID: **NV00922-GC1_201027C** QC Batch: **R148336**				PrepDate:			Analyst: **PL**
Total TPH	62	21	100	J	ug/L	1	10/29/2020

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

CLIENT: CH2MHill
Work Order: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **MB-82771** SampType: **MBLK** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **10/28/2020** RunNo: **148346**
Client ID: **PBW** Batch ID: **82771** TestNo: **EPA 200.8** Analysis Date: **10/29/2020** SeqNo: **3984435**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50									
Lead	ND	0.50									
Zinc	ND	1.0									

Sample ID: **LCS-82771** SampType: **LCS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **10/28/2020** RunNo: **148346**
Client ID: **LCSW** Batch ID: **82771** TestNo: **EPA 200.8** Analysis Date: **10/29/2020** SeqNo: **3984436**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.106	0.50	10.00	0	101	85	115				
Lead	9.874	0.50	10.00	0	98.7	85	115				
Zinc	10.318	1.0	10.00	0	103	85	115				

Sample ID: **N042758-001D-DUP** SampType: **DUP** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **10/28/2020** RunNo: **148346**
Client ID: **ZZZZZZ** Batch ID: **82771** TestNo: **EPA 200.8** Analysis Date: **10/29/2020** SeqNo: **3984439**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50						0	0	20	
Lead	ND	0.50						0	0	20	
Zinc	3.805	1.0						4.471	16.1	20	

Sample ID: **N042758-001D-MS** SampType: **MS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **10/28/2020** RunNo: **148346**
Client ID: **ZZZZZZ** Batch ID: **82771** TestNo: **EPA 200.8** Analysis Date: **10/29/2020** SeqNo: **3984441**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	9.268	0.50	10.00	0	92.7	75	125				
Lead	10.648	0.50	10.00	0	106	75	125				
Zinc	12.886	1.0	10.00	4.471	84.1	75	125				

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: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **N042758-001D-MSD** SampType: **MSD** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **10/28/2020** RunNo: **148346**
Client ID: **ZZZZZZ** Batch ID: **82771** TestNo: **EPA 200.8** Analysis Date: **10/29/2020** SeqNo: **3984445**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	9.362	0.50	10.00	0	93.6	75	125	9.268	1.02	20	
Lead	10.638	0.50	10.00	0	106	75	125	10.65	0.0983	20	
Zinc	12.699	1.0	10.00	4.471	82.3	75	125	12.89	1.46	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

CLIENT: CH2MHill
Work Order: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Sample ID: **MB-82773**	SampType: **MBLK**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **10/28/2020**	RunNo: **148316**
Client ID: **PBW**	Batch ID: **82773**	TestNo: **EPA 245.1**		Analysis Date: **10/28/2020**	SeqNo: **3982416**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050									

Sample ID: **LCS-82773**	SampType: **LCS**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **10/28/2020**	RunNo: **148316**
Client ID: **LCSW**	Batch ID: **82773**	TestNo: **EPA 245.1**		Analysis Date: **10/28/2020**	SeqNo: **3982417**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.560	0.050	2.500	0	102	85	115				

Sample ID: **N042772-001D-DUP**	SampType: **DUP**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **10/28/2020**	RunNo: **148316**
Client ID: **ZZZZZZ**	Batch ID: **82773**	TestNo: **EPA 245.1**		Analysis Date: **10/28/2020**	SeqNo: **3982420**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050						0	0	20	

Sample ID: **N042772-001D-MS**	SampType: **MS**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **10/28/2020**	RunNo: **148316**
Client ID: **ZZZZZZ**	Batch ID: **82773**	TestNo: **EPA 245.1**		Analysis Date: **10/28/2020**	SeqNo: **3982422**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.160	0.050	2.500	0	86.4	75	125				

Sample ID: **N042772-001D-MSD**	SampType: **MSD**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **10/28/2020**	RunNo: **148316**
Client ID: **ZZZZZZ**	Batch ID: **82773**	TestNo: **EPA 245.1**		Analysis Date: **10/28/2020**	SeqNo: **3982423**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.420	0.050	2.500	0	96.8	75	125	2.160	11.4	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

CLIENT: CH2MHill
Work Order: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: **MB-82783**	SampType: **MBLK**	TestCode: **8015_W_FP_**	Units: **ug/L**	Prep Date: **10/28/2020**	RunNo: **148336**
Client ID: **PBW**	Batch ID: **82783**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **10/28/2020**	SeqNo: **3983878**

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)	18.036	25									J
Surr: Octacosane	61.697		80.00		77.1	26	152				
Surr: p-Terphenyl	58.503		80.00		73.1	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

CLIENT: CH2MHill
Work Order: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: **MB-R148336** SampType: **MBLK** TestCode: **8015_W_SFP** Units: **ug/L** Prep Date: RunNo: **148336**
Client ID: **PBW** Batch ID: **R148336** TestNo: **EPA 8015B** Analysis Date: **10/29/2020** SeqNo: **3983883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	58.036	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

CLIENT: CH2MHill
Work Order: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Sample ID: **E201028LCS** SampType: **LCS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **148325**
Client ID: **LCSW** Batch ID: **E20VW106** TestNo: **EPA 8015B** Analysis Date: **10/28/2020** SeqNo: **3982728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	832.000	50	1000	0	83.2	67	136				
Surr: Chlorobenzene - d5	46018.000		50000		92.0	74	138				

Sample ID: **E201028MB** SampType: **MBLK** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **148325**
Client ID: **PBW** Batch ID: **E20VW106** TestNo: **EPA 8015B** Analysis Date: **10/28/2020** SeqNo: **3982729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	40.000	50									J
Surr: Chlorobenzene - d5	54320.000		50000		109	74	138				

Sample ID: **N042772-001BMS** SampType: **MS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **148325**
Client ID: **ZZZZZZ** Batch ID: **E20VW106** TestNo: **EPA 8015B** Analysis Date: **10/28/2020** SeqNo: **3982732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1156.000	50	1000	40.00	112	67	136				
Surr: Chlorobenzene - d5	53301.000		50000		107	74	138				

Sample ID: **N042772-001BMSD** SampType: **MSD** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **148325**
Client ID: **ZZZZZZ** Batch ID: **E20VW106** TestNo: **EPA 8015B** Analysis Date: **10/28/2020** SeqNo: **3982733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	943.000	50	1000	40.00	90.3	67	136	1156	20.3	30	
Surr: Chlorobenzene - d5	46433.000		50000		92.9	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: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **R201028-LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148328**
Client ID: **LCSW** Batch ID: **R20VW015** TestNo: **EPA 8260B** Analysis Date: **10/28/2020** SeqNo: **3982799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	19.940	0.50	20.00	0	99.7	69	133				
1,2-Dichloroethane	21.160	0.50	20.00	0	106	69	132				
Benzene	19.940	1.0	20.00	0	99.7	81	122				
Ethylbenzene	20.560	1.0	20.00	0	103	73	127				
m,p-Xylene	43.480	1.0	40.00	0	109	76	128				
MTBE	19.240	1.0	20.00	0	96.2	65	123				
o-Xylene	21.420	1.0	20.00	0	107	80	121				
Tert-Butanol	99.930	5.0	100.0	0	99.9	70	130				
Toluene	20.030	2.0	20.00	0	100	77	122				
Xylenes, Total	64.900	2.0	60.00	0	108	75	125				
Surr: 1,2-Dichloroethane-d4	25.450		25.00		102	72	119				
Surr: 4-Bromofluorobenzene	26.250		25.00		105	76	119				
Surr: Dibromofluoromethane	24.740		25.00		99.0	85	115				
Surr: Toluene-d8	25.260		25.00		101	81	120				

Sample ID: **N042772-001A-MS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148328**
Client ID: **ZZZZZZ** Batch ID: **R20VW015** TestNo: **EPA 8260B** Analysis Date: **10/28/2020** SeqNo: **3982800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	18.120	0.50	20.00	0	90.6	69	133				
1,2-Dichloroethane	19.630	0.50	20.00	0	98.2	69	132				
Benzene	18.840	1.0	20.00	0	94.2	81	122				
Ethylbenzene	19.960	1.0	20.00	0	99.8	73	127				
m,p-Xylene	42.010	1.0	40.00	0	105	76	128				
MTBE	17.420	1.0	20.00	0	87.1	65	123				
o-Xylene	20.610	1.0	20.00	0	103	80	121				
Tert-Butanol	87.850	5.0	100.0	0	87.8	70	130				
Toluene	18.830	2.0	20.00	0	94.2	77	122				
Xylenes, Total	62.620	2.0	60.00	0	104	75	125				
Surr: 1,2-Dichloroethane-d4	24.350		25.00		97.4	72	119				

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: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **N042772-001A-MS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148328**
Client ID: **ZZZZZZ** Batch ID: **R20VW015** TestNo: **EPA 8260B** Analysis Date: **10/28/2020** SeqNo: **3982800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	26.250		25.00		105	76	119				
Surr: Dibromofluoromethane	23.520		25.00		94.1	85	115				
Surr: Toluene-d8	25.200		25.00		101	81	120				

Sample ID: **N042772-001A-MSD** SampType: **MSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148328**
Client ID: **ZZZZZZ** Batch ID: **R20VW015** TestNo: **EPA 8260B** Analysis Date: **10/28/2020** SeqNo: **3982801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	18.280	0.50	20.00	0	91.4	69	133	18.12	0.879	20	
1,2-Dichloroethane	20.290	0.50	20.00	0	101	69	132	19.63	3.31	20	
Benzene	19.100	1.0	20.00	0	95.5	81	122	18.84	1.37	20	
Ethylbenzene	20.070	1.0	20.00	0	100	73	127	19.96	0.550	20	
m,p-Xylene	42.250	1.0	40.00	0	106	76	128	42.01	0.570	20	
MTBE	18.500	1.0	20.00	0	92.5	65	123	17.42	6.01	20	
o-Xylene	21.190	1.0	20.00	0	106	80	121	20.61	2.78	20	
Tert-Butanol	89.970	5.0	100.0	0	90.0	70	130	87.85	2.38	20	
Toluene	19.230	2.0	20.00	0	96.2	77	122	18.83	2.10	20	
Xylenes, Total	63.440	2.0	60.00	0	106	75	125	62.62	1.30	20	
Surr: 1,2-Dichloroethane-d4	24.230		25.00		96.9	72	119		0		
Surr: 4-Bromofluorobenzene	26.450		25.00		106	76	119		0		
Surr: Dibromofluoromethane	23.740		25.00		95.0	85	115		0		
Surr: Toluene-d8	25.580		25.00		102	81	120		0		

Sample ID: **R201028-MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148328**
Client ID: **PBW** Batch ID: **R20VW015** TestNo: **EPA 8260B** Analysis Date: **10/28/2020** SeqNo: **3982802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
Benzene	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

CLIENT: CH2MHill
Work Order: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **R201028-MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148328**
Client ID: **PBW** Batch ID: **R20VW015** TestNo: **EPA 8260B** Analysis Date: **10/28/2020** SeqNo: **3982802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
MTBE	ND	1.0									
o-Xylene	ND	1.0									
Tert-Butanol	ND	5.0									
Toluene	ND	2.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	25.780		25.00		103	72	119				
Surr: 4-Bromofluorobenzene	24.410		25.00		97.6	76	119				
Surr: Dibromofluoromethane	25.020		25.00		100	85	115				
Surr: Toluene-d8	25.140		25.00		101	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

CLIENT: CH2MHill
Work Order: N042772
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270WATER_SIMEXT

Sample ID: **LCS-82774**	SampType: **LCS**	TestCode: **8270WATER_**	Units: **µg/L**	Prep Date: **10/28/2020**	RunNo: **148322**
Client ID: **LCSW**	Batch ID: **82774**	TestNo: **EPA 8270C**	**EPA 3510C**	Analysis Date: **10/28/2020**	SeqNo: **3982636**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	2.390	1.0	6.000	0	39.8	24	120				
Surr: Phenol-d5	0.340		1.000		34.0	25	108				

Sample ID: **LCSD-82774**	SampType: **LCSD**	TestCode: **8270WATER_**	Units: **µg/L**	Prep Date: **10/28/2020**	RunNo: **148322**
Client ID: **LCSS02**	Batch ID: **82774**	TestNo: **EPA 8270C**	**EPA 3510C**	Analysis Date: **10/28/2020**	SeqNo: **3982637**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	2.480	1.0	6.000	0	41.3	24	120	2.390	3.70	20	
Surr: Phenol-d5	0.360		1.000		36.0	25	108		0		

Sample ID: **MB-82774**	SampType: **MBLK**	TestCode: **8270WATER_**	Units: **µg/L**	Prep Date: **10/28/2020**	RunNo: **148322**
Client ID: **PBW**	Batch ID: **82774**	TestNo: **EPA 8270C**	**EPA 3510C**	Analysis Date: **10/28/2020**	SeqNo: **3982638**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	1.0									
Surr: Phenol-d5	0.350		1.000		35.0	25	108				

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

N042772

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

CHAIN OF CUSTODY RECORD

DATE: 10/27/20
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: Ryan Koch	Report To: Eric Davis	Attention: Ryan Koch - Ref. AFE# 81195	Sampler Name: James Dye
Address: 1001 Louisiana St., Houston, TX 77002	Copy To: Ryan Koch	Company Name: Kinder Morgan Energy Partners	Sampler Signature:
Email To: Ryan_Koch@kindermorgan.com eric.davis@jacobs.com; nils.ortzky@jacobs.com	Purchase Order No.:	Address: 1001 Louisiana St., Houston, TX 77002	Sample Date: 10/27/20
Phone 713-420-6730 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=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS	Analysis Test: BTEX, 1,1-DCA, 1,2-DCA, MTBE, TBA (8260B)	TPH-gas (C4-C12) (8015B)	TPH-d (C13-C22); TPH-oil (C23+), Total TPH (8015B)	Cu, Pb, Zn (200.8); Hg (245.1)	Phenol (8270)	Comments
	CONTAINER TYPE							V	V	A	P	A	
	# OF CONTAINERS							3	3	3	1	2	
	PRESERVATIVE							H	H	--	N	--	
	VOLUME (mL)							40	40	1000	500	1000	
1	EFF-102720	EFFLUENT	W	G	10/27/20	0900	12	X	X	X	X	X	N042772-01
2													Report metals, TPH and VOC preliminary data on 24-hr TAT
3													Report total Xylenes
4													
5													
6													
7													
8													
9													
10													

Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
	10/27/20 1000		10/27/20 1408
	10/27/20 1530	THAD	10/27/20 1530
THAD	10/27/20 1800	Belkys Hernandez BHH	10/28/20 8:30AM

CHILLED / INTACT / ICE COOLER / 3.8°C
IR# 1 / ASSET COURIER

Turn Around Time (TAT):
- ☐A = Same Day
- ☑B = 24 Hours
- ☐C = 48 Hours
- ☐D = 72 Hours
- ☑E = 5 Workdays
- ☐E = 10 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instruction:
Las Vegas
2.3°C IR#2
CSO# 5783

Matrix:			Preservatives:			Container Type:			
W = Water	WW = Wastewater		H = HCl	N = HNO3	S = H2SO4	T = Tube	V = VOA	P = Pint	A = Amber
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	

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:	10/27/2020	Workorder:	N042772
Rep sample Temp (Deg C):	3.8	IR Gun ID:	1
Temp Blank:	☐ Yes ☑ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

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

Comments: Received at Las Vegas Lab on 10/28/20 at 2.3 oC, IR# 2, GSO# 5783.

For:

Checklist Completed By: TM BHdez 10/28/2020

Reviewed By: MBC 10/28/2020

ASSET Laboratories

WORK ORDER Summary

28-Oct-20

WorkOrder: N042772

Client ID: CH2HI03

Project: SFPP Norwalk **QC Level:** RTNE **Date Received:** 10/27/2020

Comments: Report metals, TPH and VOC preliminary data on 24 HR TAT

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N042772-001A	EFF-102720	10/27/2020 9:00:00 AM	10/29/2020	Water	EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	V-CA
N042772-001B			10/29/2020		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	☐	☐	☐	VW
N042772-001C			10/29/2020		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	☐	☐	☐	WW
			10/29/2020		EPA 8015B	TPH EXTRACTABLE BY GC/FID	☐	☐	☐	WW
			10/29/2020		EPA 8015B	Total TPH	☐	☐	☐	WW
N042772-001D			10/29/2020			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			10/29/2020		EPA 200.8	TOTAL METALS BY ICPMS	☐	☐	☐	WW
			10/29/2020		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			10/29/2020			MERCURY PREP	☐	☐	☐	WW
N042772-001E			11/3/2020		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: 8270C - SIM	☐	☐	☐	WW
			11/3/2020		EPA 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	WW
N042772-002A	FOLDER	10/29/2020	10/29/2020		Folder	Folder	☐	☐	☐	LAB
			10/29/2020		Folder	Folder	☐	☐	☐	LAB

GLS

800-322-5555
www.gls-us.com

Ship From
ASSET LABORATORIES
THAD MALIT
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Ship To
ASSET LABORATORIES
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

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

Delivery Instructions:
HOLD FOR PICK UP
Signature Type: STANDARD

Tracking #: 550955783

CPS

LAS VEGAS

C89102A

29606498

LVS NV891-A 1

Print Date: 10/27/2020 4:35 PM

Package 2 of 2

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

2-3°C
Ice A2

Eric Davis
Jacobs
2600 Michelson Drive, Suite 500
Irvine, CA 92612

November 27, 2020

Eric:

I have enclosed our report "Chronic Toxicity Testing of the SFPP Norwalk Pump Station Effluent" for the samples collected on October 26, 28, and 29, 2020. Test results are summarized as follows:

Test Species	Test Material	IWC	Test Endpoint	Percent (%) Effect	TST Analysis
Fathead Minnows	Effluent	100% Effluent	Survival	-5.4%	Pass
			Growth	-35.5%	Pass

If you have any questions regarding the current test results, please feel free to contact me at (707) 207-7760.

Sincerely,

Jessica Okutsu
Project Manager

Cc: Ryan Koch, Kinder Morgan Energy Partners

Pacific EcoRisk is accredited in accordance with NELAP (ORELAP ID 4043). Pacific EcoRisk certifies that the test results reported herein conform to the most current NELAP requirements for parameters for which accreditation is required and available. Any exceptions to NELAP requirements are noted, where applicable, in the body of the report. This report shall not be reproduced, except in full, without the written consent of Pacific EcoRisk. This testing was performed under Lab Order 32189.

Chronic Toxicity Testing of the SFPP Norwalk Pump Station Effluent

Samples collected October 26, 28, and 29, 2020

Prepared For

Jacobs
2600 Michelson Drive, Suite 500
Irvine, CA 92612

Prepared By

Pacific EcoRisk
2250 Cordelia Road
Fairfield, CA 94534

November 2020

PACIFIC ECORISK
ENVIRONMENTAL CONSULTING & TESTING

Chronic Toxicity Testing of the SFPP Norwalk Pump Station Effluent

Samples collected October 26, 28, and 29, 2020

Table of Contents

Appendices

1. INTRODUCTION

Jacobs has contracted Pacific EcoRisk (PER) to evaluate the chronic toxicity of the SFPP Norwalk Pump Station (SFPP Norwalk) effluent. The current evaluation consisted of performing USEPA's 7-day survival and growth test with the fathead minnow, using samples of effluent collected on October 26, 28, and 29, 2020. In order to assess the sensitivity of the test organisms to toxic stress, a reference toxicant test was also performed. This report describes the performance and results of these tests.

2. TOXICITY TEST PROCEDURES

The performance of these tests followed the guidelines established by the USEPA manual "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013).

2.1 Sample Receipt and Handling

On October 26, 28, and 29, samples of SFPP Norwalk effluent were collected into appropriately cleaned sample containers. These samples were transported on ice and under chain-of-custody to the PER laboratory in Fairfield, CA. Upon receipt at the laboratory, aliquots of each sample were collected for analysis of initial water quality characteristics (Table 1), with the remainder of the samples stored at 0-6°C except when being used to prepare test solutions. The chain-of-custody records for the collection and delivery of these samples are presented in Appendix A.

Table 1. Initial water quality characteristics of the samples.

Sample Receipt Date	Sample ID	Temp (˚C)	pH	D.O. (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Conductivity (µS/cm)	Total Ammonia (mg/L N)
10/27/20	EFF-10-26-20	0.1	7.84	8.6	266	632	2087	<1.0
10/29/20	EFF-10-28-20	0.4	7.84	8.2	270	668	2050	<1.0
10/30/20	EFF-10-29-20	3.7	7.57	6.0	313	570	2056	<1.0

2.2 Chronic Toxicity Testing with Fathead Minnows

The chronic toxicity test with fathead minnows consists of exposing larval fish to the effluent for seven days, after which effects on survival and growth are evaluated. The specific procedures used in this test are described below.

The larval fathead minnows used in this test were obtained from a commercial supplier (Aquatox, Hot Springs, AR). These fish were maintained at 25˚C in aerated aquaria containing

EPA synthetic moderately-hard water prior to their use in this test. During this pre-test period, the fish were fed brine shrimp nauplii *ad libitum.*

The Lab Water Control medium for this test consisted of US EPA synthetic moderately-hard water. The effluent was tested at the 100% concentration only. "New" water quality characteristics (pH, D.O., and conductivity) were measured on these test solutions prior to use in the test.

There were four replicates at each test treatment, each replicate consisting of 200 mL of test solution in a 600-mL glass beaker. This test was initiated by randomly allocating 10 larval fathead minnows (<48 hours old) into each replicate. The replicate beakers were placed in a temperature-controlled room at 25˚C, under cool-white fluorescent lighting on a 16L:8D photoperiod. The test fish were fed brine shrimp nauplii twice daily.

Each day of the test, fresh test solutions were prepared and characterized as before. The test replicate beakers were examined, with any dead animals, uneaten food, wastes, and other detritus being removed. The number of live fish in each replicate was determined and then approximately 80% of the test media in each beaker was carefully poured out and replaced with fresh test solution. "Old" water quality characteristics (pH, D.O., and conductivity) were measured on the test solution that had been discarded from at least one randomly-selected replicate at each treatment.

After seven days exposure, the number of live fish in each replicate beaker was recorded. The fish from each replicate were then carefully euthanized in methanol, rinsed in de-ionized water, and transferred to a pre-dried and pre-tared weighing pan. These fish were then dried at 100˚C for >24 hours and re-weighed to determine the total weight of fish in each replicate. The total weight was then divided by the initial number of fish per replicate to determine the biomass value. The resulting survival and biomass value data were analyzed to evaluate any potential impairment caused by the effluent. All statistical analyses were performed using CETIS.

2.3 Reference Toxicant Testing of the Fathead Minnows

The reference toxicant test was performed similarly to the effluent test except that test solutions consisted of Lab Water Control medium spiked with NaCl at test concentrations of 0.75, 1.5, 3, 6, and 9 g/L. The resulting test response data were analyzed to determine key dose-response point estimates. All statistical analyses were made using CETIS. These response endpoints were then compared to the typical response ranges established by the mean ± 2 SD of the point estimates generated by the most recent previous reference toxicant tests performed by this lab.

3. RESULTS

3.1 Chronic Toxicity of SFPP Norwalk Effluent to Fathead Minnows

The results of this test are summarized in Table 2. There was a -5.4% effect to survival and a -35.5% effect to growth in the 100% effluent; the TST analysis resulted in a pass for both endpoints. The test data and summary of statistical analyses for this test are presented in Appendix B.

Table 2. Chronic toxicity of SFPP Norwalk effluent to fathead minnows.

Effluent Treatment	Mean % Survival	Mean Fish Biomass Value (mg)
Lab Water Control	92.5	0.76
100% Effluent	97.5	1.03
Summary of Statistics		
Percent (%) Effect =	-5.4%	-35.5%
TST Analysis =	Pass	Pass

3.2 Reference Toxicant Toxicity to Fathead Minnows

The results of this test are summarized in Table 3. The EC_{50} and IC_{50} for this test were consistent with the typical response ranges established by the reference toxicant test database for this species, indicating that these organisms were responding to toxic stress in a typical and consistent fashion. The test data and summary of statistical analyses for this test are presented in Appendix C.

Table 3. Reference toxicant testing: Effects of NaCl on fathead minnows.

NaCl Treatment (g/L)	Mean % Survival	Mean Fish Biomass Value (mg)
Lab Water Control	100	1.00
0.75	100	1.17
1.5	92.5	1.12
3.0	**62.5***	0.59
6.0	**30.0***	0.10
9.0	**0***	-
Summary of Statistics		
Survival EC_{50} or Growth IC_{50} =	3.69 g/L NaCl	3.27 g/L NaCl

* The response at this test treatment was significantly less than the Lab Water Control treatment response ($p < 0.05$).

4. SUMMARY AND CONCLUSIONS

An evaluation of the chronic toxicity of SFPP Norwalk effluent was performed using samples collected on October 26, 28, and 29, 2020. Test results are summarized as follows:

Test Species	Test Material	IWC	Test Endpoint	Percent (%) Effect	TST Analysis
Fathead Minnows	Effluent	100% Effluent	Survival	-5.4%	Pass
			Growth	-35.5%	Pass

4.1 QA/QC Summary

Test Conditions – Test conditions (pH, D.O., temperature, etc.) were all within acceptable limits. All test analyses were performed according to laboratory Standard Operating Procedures.

Negative Control – The biological responses for the test organisms at the Lab Control treatments were within acceptable limits.

Positive Lab Control – The reference toxicant test results were consistent with the typical response ranges established by the reference toxicant test database, indicating that these test organisms were responding to toxic stress in a typical fashion.

Concentration Response Relationships – The concentration-response relationship for the reference toxicant test was evaluated as per EPA guidelines (EPA-821-B-00-004) and was determined to be acceptable.

Appendix A

Chain-of-Custody Records for the Collection and Delivery of the Samples

Pacific EcoRisk
2250 Cordelia Rd.
Fairfield, CA 94534
Tel 707-207-7760 Fax: 707-207-7916
Jessica Okutsu (jokutsu@pacificecorisk.com

CHAIN OF CUSTODY RECORD
DATE: 10-26-20
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: Ryan Koch	Report To:	Eric Davis	Attention:	Ryan Koch - Ref. AFE# 81195	Sampler Name:	Nils Orliczky
Address:	1001 Louisiana St., Houston, TX 77002	Copy To:	Ryan Koch	Company Name:	Kinder Morgan Energy Partners	Sampler Signature:	[signature]
Email To:	Ryan_Koch@kindermorgan.com eric.davis@jacobs.com; nils.orliczky@jacobs.com	Purchase Order No.:		Address:	1001 Louisiana St., Houston, TX 77002	Sample Date:	10-26-20
Phone 713-420-6730	Fax 714-560-4801	Project Name:	**SFPP Norwalk**	P.Eco Project Manager:	Jessica Okutsu		

Section E
Required Sample Information

								Analysis Test	Topsmelt (Atherinops affinis) (Survival and Growth Test Method 1006)	Fat head Minnow) (Survival and Growth Test Method 1000)	
					CONTAINER TYPE					P	
					# OF CONTAINERS					1	
					PRESERVATIVE					–	
					VOLUME (Gallon)					1	
ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS				Comments
1	EFF- 10 -26 -20	EFFLUENT	W	C	10/26/20	15:30	1			X	
2											
3											
4											
5											
6											
7											
8											
9											
10											

10-26-20 [signature]

Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
[signature]	10-26-20/ 1550	Rec'd [signature] Hannah Duane	10/27/20 1030
Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time

Turn Around Time (TAT):
- A = Same Day
- B = 24 Hours
- C = 48 Hours
- D = 72 Hours
- E = 5 Workdays
- E = 10 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instruction:

Matrix:		
W = Water	WW = Wastewater	
O = Oil	P = Product	S = Soil
Others/Specify:		

Preservatives:		
H = HCl	N = HNO3	S = H2SO4
Z = Zn(AC)2	O = NaOH	T = Na2S2O3
Others/Specify:		

Container Type:			
T = Tube	V = VOA	P = Pint	A = Amber
J = Jar	B = Tedlar	G = Glass	
M = Metal	P = Plastic	C = Can	

Pacific EcoRisk
2250 Cordelia Rd.
Fairfield, CA 94534
Tel 707-207-7760 Fax: 707-207-7916
Jessica Okutsu (jokutsu@pacificecorisk.com

CHAIN OF CUSTODY RECORD
DATE: 10-28-20
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: Ryan Koch	Report To: Eric Davis	Attention: Ryan Koch - Ref. AFE# 81195	Sampler Name: Nils Orliczky
Address: 1001 Louisiana St., Houston, TX 77002	Copy To: Ryan Koch	Company Name: Kinder Morgan Energy Partners	Sampler Signature: [signature]
Email To: Ryan_Koch@kindermorgan.com eric.davis@jacobs.com; nils.orliczky@jacobs.com	Purchase Order No.:	Address: 1001 Louisiana St., Houston, TX 77002	Sample Date: 10-28-20
Phone 713-420-6730 Fax 714-560-4801	Project Name: SFPP Norwalk	P.Eco Project Manager: Jessica Okutsu	

Section E Required Sample Information

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS	Analysis Test	Topsmelt (Atherinops affinis) (Survival and Growth Test Method 1006)	Fat head Minnow) (Survival and Growth Test Method 1000)	Comments
	CONTAINER TYPE									P	
	# OF CONTAINERS									1	
	PRESERVATIVE									–	
	VOLUME (Gallon)									1	
1	EFF- 10 -28 -20	EFFLUENT	W	C	10/28/20	0815	1			X	
2											
3											
4											
5											
6											
7											
8											
9											
10											

10-28-20 [initials]

Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
[signature]	10-28-20 / 1309	Alex Aguila	10/29/20 / 1001

Turn Around Time (TAT):
- A = Same Day
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- C = 48 Hours
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Others/Specify:		

Preservatives:		
H = HCl	N = HNO3	S = H2SO4
Z = Zn(AC)2	O = NaOH	T = Na2S2O3
Others/Specify:		

Container Type:			
T = Tube	V = VOA	P = Pint	A = Amber
J = Jar	B = Tedlar	G = Glass	
M = Metal	P = Plastic	C = Can	

Pacific EcoRisk
2250 Cordelia Rd.
Fairfield, CA 94534
Tel: 707-207-7760 Fax: 707-207-7916
Jessica Okutsu (jokutsu@pacificecorisk.com

CHAIN OF CUSTODY RECORD

DATE: 10-29-20
PAGE: 1 of 1

Section A
Required Client Information:

Company:	Kinder Morgan Energy Partners Attention: Ryan Koch
Address:	1001 Louisiana St., Houston, TX 77002
Email To:	Ryan_Koch@kindermorgan.com eric.davis@jacobs.com; nils.orliczky@jacobs.com
Phone 713-420-6730	Fax 714-560-4801

Section B
Required Project Information:

Report To:	Eric Davis
Copy To:	Ryan Koch
Purchase Order No.:	
Project Name:	SFPP Norwalk

Section C
Invoice Information:

Attention:	Ryan Koch - Ref. AFE# 81195
Company Name:	Kinder Morgan Energy Partners
Address:	1001 Louisiana St., Houston, TX 77002
P.Eco Project Manager:	Jessica Okutsu

Section D
Sampler Information:

Sampler Name:	Nils Orliczky
Sampler Signature:	[signature]
Sample Date:	10-29-20

Section E
Required Sample Information

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS	Analysis Test	Topsmelt (Atherinops affinis) (Survival and Growth Test Method 1006)	Fat head Minnow) (Survival and Growth Test Method 1000)	Comments
		CONTAINER TYPE								P	
		# OF CONTAINERS								1	
		PRESERVATIVE								--	
		VOLUME (Gallon)								1	
1	EFF- 10 -29 -20	EFFLUENT	W	C	10/29/20	1045	1			X	
2											
3											
4											
5											
6											
7											
8											
9											
10											

10-29-20 [signature]

Relinquished by (Signature and Printed Name):	Date / Time	Received ~~Relinquished~~ by (Signature and Printed Name):	Date / Time
[signature]	10-29-20 / 1150	John R [signature] John Richard	10/30/20 1040
Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time

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Others/Specify:		

Preservatives:		
H = HCl	N = HNO3	S = H2SO4
Z = Zn(AC)2	O = NaOH	T = Na2S2O3
Others/Specify:		

Container Type:			
T = Tube	V = VOA	P = Pint	A = Amber
J = Jar	B = Tedlar	G = Glass	
M = Metal	P = Plastic	C = Can	

Appendix B

Test Data and Summary of Statistics for the Evaluation of the Chronic Toxicity of SFPP Norwalk Effluent to Fathead Minnows

CETIS Summary Report

Chronic Larval Fish Survival and Growth Test

Pacific EcoRisk

Batch ID:	04-5583-8166	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Jessica Okutsu	
Start Date:	27 Oct-20 15:19	**Protocol:**	EPA-821-R-02-013 (2002)	**Diluent:**	Not Applicable	
Ending Date:	03 Nov-20 09:05	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 18h	**Taxon:**	Actinopterygii	**Source:**	Aquatox, AR	**Age:** 1

Sample ID:	11-4856-6767	**Code:**	Effluent	**Project:**	32189	
Sample Date:	26 Oct-20 15:30	**Material:**	Effluent	**Source:**	SFPP Norwalk Station	
Receipt Date:	27 Oct-20 10:30	**CAS (PC):**		**Station:**	EFF-10-26-20	
Sample Age:	24h (0.1 °C)	**Client:**	Jacobs			

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
00-9716-9945	7d Survival Rate	TST-Welch's t Test	0.0010	100% passed 7d survival rate	1
07-7919-9742	Mean Dry Biomass-mg	TST-Welch's t Test	0.0017	100% passed mean dry biomass-mg	1

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	4	0.925	0.773	1.080	0.800	1.000	0.048	0.096	10.35%	0.00%
100		4	0.975	0.895	1.050	0.900	1.000	0.025	0.050	5.13%	-5.41%

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	4	0.76	0.486	1.03	0.611	0.985	0.0862	0.172	22.68%	0.00%
100		4	1.03	0.919	1.14	0.941	1.09	0.0345	0.0691	6.71%	-35.47%

7d Survival Rate Detail

MD5: 8F768C6025D87F6F7CDED94F4225B0B3

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	0.900	0.800	1.000	1.000
100		1.000	0.900	1.000	1.000

Mean Dry Biomass-mg Detail

MD5: D8211CBD994011D70DCAB91FA7F7A737

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	0.611	0.64	0.803	0.985
100		0.941	1.01	1.09	1.07

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	9/10	8/10	10/10	10/10
100		10/10	9/10	10/10	10/10

CETIS Analytical Report

Chronic Larval Fish Survival and Growth Test — **Pacific EcoRisk**

Analysis ID:	00-9716-9945	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	05 Nov-20 18:54	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	05 Nov-20 18:51	**MD5 Hash:**	8F768C6025D87F6F7CDED94F4225B0B3	**Editor ID:**	004-996-743-9

Data Transform	Alt Hyp	TST_b	Comparison Result
Angular (Corrected)	C*b < T	0.75	100% passed 7d survival rate endpoint

TST-Welch's t Test

Control	vs	Conc-%	Test Stat	Critical	DF	P-Type	P-Value	Decision(α:25%)
Lab Water Contr		100*	5.84	0.727	5	CDF	0.0010	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.011618	0.011618	1	0.823	0.3993	Non-Significant Effect
Error	0.0847049	0.0141175	6			
Total	0.0963229		7			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	3.25	47.5	0.3586	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.895	0.645	0.2593	Normal Distribution

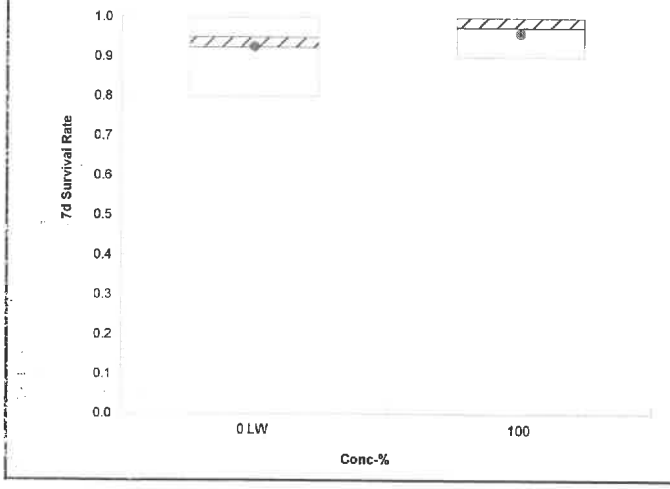
7d Survival Rate Summary

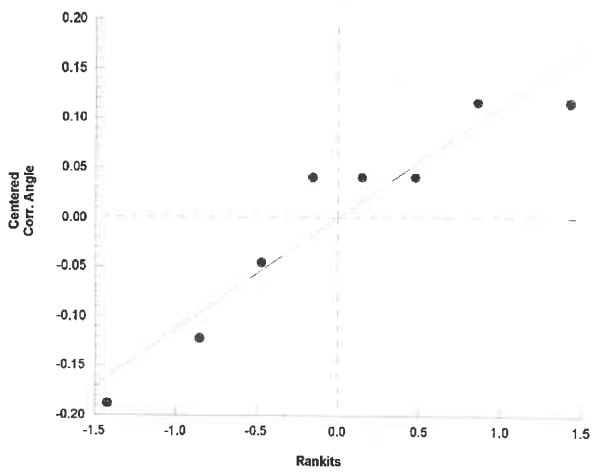
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	4	0.925	0.773	1.000	0.950	0.800	1.000	0.048	10.35%	0.00%
100		4	0.975	0.895	1.000	1.000	0.900	1.000	0.025	5.13%	-5.41%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	4	1.300	1.060	1.530	1.330	1.110	1.410	0.074	11.35%	0.00%
100		4	1.370	1.240	1.500	1.410	1.250	1.410	0.041	5.94%	-5.89%

Graphics





Chronic Larval Fish Survival and Growth Test

Pacific EcoRisk

Analysis ID:	07-7919-9742	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.7
Analyzed:	05 Nov-20 18:54	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	05 Nov-20 18:51	**MD5 Hash:**	D8211CBD994011D70DCAB91FA7F7A737	**Editor ID:**	004-996-743-9

Data Transform	Alt Hyp	TST_b	Comparison Result
Untransformed	C*b < T	0.75	100% passed mean dry biomass-mg endpoint

TST-Welch's t Test

Control	vs	Conc-%	Test Stat	Critical	DF	P-Type	P-Value	Decision(α:25%)
Lab Water Contr		100*	6.27	0.741	4	CDF	0.0017	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.14526	0.14526	1	8.43	0.0272	Significant Effect
Error	0.103379	0.0172298	6			
Total	0.248638		7			

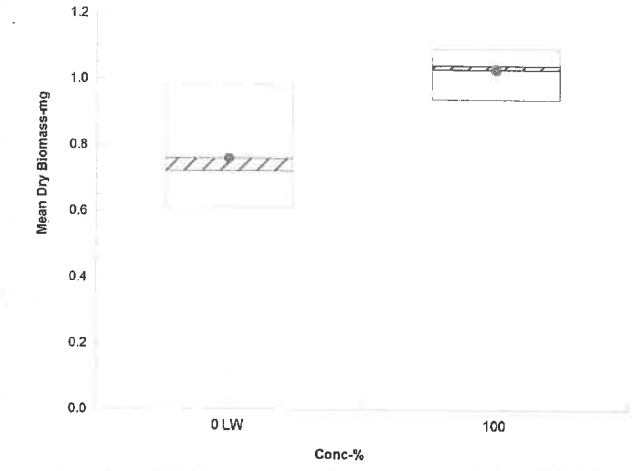
ANOVA Assumptions Tests

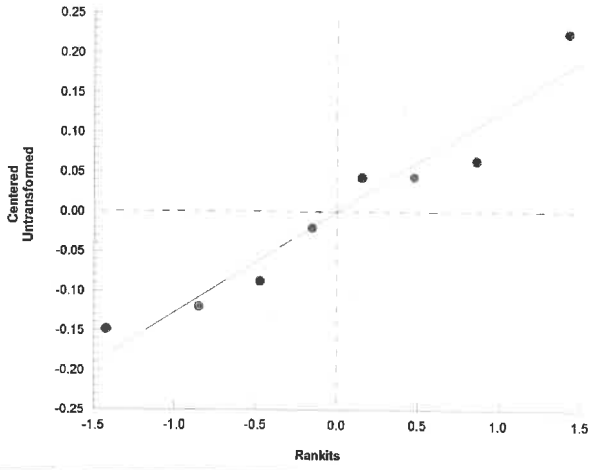
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	6.23	47.5	0.1673	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.938	0.645	0.5887	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	4	0.76	0.486	1.03	0.722	0.611	0.985	0.0862	22.68%	0.00%
100		4	1.03	0.919	1.14	1.04	0.941	1.09	0.0345	6.71%	-35.47%

Graphics





7 Day Chronic Fathead Minnow Toxicity Test Data

Client: **Jacobs: SFPP Norwalk** Organism Log#: 123916 Age: <48hr

Test Material: Effluent Organism Supplier: Aquatox

Test ID#: 90069 Project #: 32189 Control/Diluent: EPAMH

Test Date: 10/27/20 Randomization: 4.2.2 Control Water Batch: 2302

Test Treatment	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Conductivity (µS/cm)	# Live Organisms A	# Live Organisms B	# Live Organisms C	# Live Organisms D	SIGN-OFF
Lab Water Control	24.2	8.00		9.0		301	10	10	10	10	Date: 10/27/20 Test Solution Prep: TF
100%	24.3	7.89		7.7		1998	10	10	10	10	Sample ID: 57352 Initiation Time: 1519
Meter ID	116A	PH26		RD11		EC12	New WQ: AC				Initiation Signoff:
Lab Water Control	25.2	7.85	7.74	8.4	8.7	298	10	10	10	10	Date: 10/28/20 Test Solution Prep: KL
100%	25.6	7.85	8.37	9.1	7.7	2030	10	MB 10/28/20 9 10	10	10	Sample ID: 57352 Renewal Time: 1042
Meter ID	90A	PH24	PH24	RD13	RD13	EC13	New WQ: RL		Old WQ: AA		Renewal Signoff: MB
Lab Water Control	24.2	7.88	7.80	8.3	8.1	319	10	10	10	10	Date: 10/29/20 Test Solution Prep:
100%	24.3	7.81	8.42	8.8	7.7	2042	10	10	10	10	Sample ID: 57360 Renewal Time: 1300
Meter ID	59A	pH24	pH25	RD10	RD11	EC13	New WQ: CC		Old WQ: CC		Renewal Signoff: KL
Lab Water Control	24.5	8.21	8.34	8.5	7.5	298	9	8	10	10	Date: 10/30/20 Test Solution Prep:
100%	24.5	7.65	8.16	6.4	7.7	1964	TPF 10/30/20 9 10	9	10	10	Sample ID: 57362 Renewal Time: 1612
Meter ID	66A	PH15	PH15	RD13	RD13	EC12	New WQ: EG		Old WQ:		Renewal Signoff:
Lab Water Control	24.7	8.04	7.79	9.5	7.7	303	9	8	10	10	Date: 10/31/20 Test Solution Prep:
100%	24.7	7.50	8.31	5.2	7.9	TPF 10/31/20 9 2011	10	9	10	10	Sample ID: 57362 Renewal Time: 1300
Meter ID	40A	PH26	PH26	RD10	RD14	EC14	New WQ: AC		Old WQ: AC		Renewal Signoff: TK
Lab Water Control	24.2	8.10	8.01	8.9	8.5	290	9	8	10	10	Date: 11/1/20 Test Solution Prep: TK
100%	24.4	7.60	8.43	7.7	8.2	2013	10	9	10	10	Sample ID: 57362 Renewal Time: 0944
Meter ID	91A	PH26	PH26	RD14	RD14	EC13	New WQ: RL		Old WQ:		Renewal Signoff: BT
Lab Water Control	24.9	DKB 4/2/20 8.03	7.99	8.8	8.1	316	9	8	10	10	Date: 11/2/20 Test Solution Prep:
100%	24.9	7.60	8.32	8.5	8.1	2052	10	9	10	10	Sample ID: 57362 Renewal Time: 1305
Meter ID	54A	pH25	PH25	RD13	RD13	EC14	New WQ: DKB		Old WQ: EG		Renewal Signoff: BT
Lab Water Control	24.4		7.77		7.3	378	9	8	10	10	Date: 11/3/20 Termination Time: 0905
100%	24.2		8.34		7.5	2168	10	9	10	10	Termination Signoff: BT
Meter ID	91A		PH24		RD13	EC13			Old WQ: EG		

Fathead Minnow Dry Weight Data Sheet

Client: **Jacobs: SFPP Norwalk** Test ID #: 90069 Project #: 32189

Test Material: Effluent Tare Weight Date: 10/29/20 Sign-off: RJ

Test Date: 10/27/20 Final Weight Date: 11/5/20 Sign-off: RJ

Pan ID	Treatment	Replicate	Initial Pan Weight (mg)	Final Pan Weight (mg)	Initial # of Organisms	Biomass Value (mg)
1	Lab Water	A	416.40	422.51	10	
2	Control	B	407.30	413.70	10	
3		C	411.75	419.78	10	
4		D	411.36	421.21	10	
5	100%	A	410.~~60~~ 11/5/20 60 RJ	420.01	10	
6		B	405.94	416.03	10	
7		C	413.06	424.00	10	
8		D	408.50	419.23	10	
QA 1			406.34	406.39		
Balance ID:			Bal 04	Bal 04		

Appendix C

Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Fathead Minnows

Chronic Larval Fish Survival and Growth Test

Pacific EcoRisk

Batch ID:	18-9923-3288	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Natalie Lynch		
Start Date:	29 Oct-20 13:38	**Protocol:**	EPA-821-R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	05 Nov-20 09:50	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 20h	**Taxon:**	Actinopterygii	**Source:**	Aquatox, AR	**Age:**	1

Sample ID:	04-5867-1955	**Code:**	NaCl	**Project:**	32262
Sample Date:	29 Oct-20 13:38	**Material:**	Sodium chloride	**Source:**	Reference Toxicant
Receipt Date:	29 Oct-20 13:38	**CAS (PC):**		**Station:**	In House
Sample Age:	--- (24 °C)	**Client:**	Reference Toxicant		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	S
19-8462-6787	7d Survival Rate	Steel Many-One Rank Sum Test		1.5	3	2.121	14.2%	1
16-6170-2582	Mean Dry Biomass-mg	Dunnett Multiple Comparison Test		1.5	>1.5	---	21.8%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓	Level	g/L	95% LCL	95% UCL	S
13-6494-1029	7d Survival Rate	GLM: Log-Normal (Probit)		EC5	1.44	1.03	1.8	1
			✓	EC10	1.77	1.34	2.15	
				EC15	2.04	1.59	2.43	
				EC20	2.28	1.83	2.68	
				EC25	2.51	2.05	2.92	
				EC40	3.19	2.72	3.67	
				EC50	3.69	3.19	4.25	
13-2724-4343	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)		IC10	1.83	1.31	2.02	1
			✓	IC15	1.99	1.5	2.27	
			✓	IC20	2.15	1.71	2.55	
			✓	IC25	2.32	1.88	2.81	
			✓	IC40	2.8	2.34	3.68	
			✓	IC50	3.27	2.47	4.24	

7d Survival Rate Summary

Conc-g/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	---	0.00%
0.75		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	---	0.00%
1.5		4	0.925	0.773	1.080	0.800	1.000	0.048	0.096	10.35%	7.50%
3		4	0.625	0.324	0.926	0.500	0.900	0.095	0.189	30.29%	37.50%
6		4	0.300	0.075	0.525	0.200	0.500	0.071	0.141	47.14%	70.00%
9		4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%

Mean Dry Biomass-mg Summary

Conc-g/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	4	1	0.829	1.17	0.899	1.15	0.0539	0.108	10.78%	0.00%
0.75		4	1.17	0.995	1.35	1.09	1.34	0.0555	0.111	9.48%	-17.07%
1.5		4	1.12	0.817	1.42	0.969	1.39	0.095	0.19	16.97%	-11.87%
3		4	0.593	0.283	0.902	0.438	0.873	0.0974	0.195	32.87%	40.78%
6		4	0.105	-0.00851	0.218	0.045	0.205	0.0356	0.0712	67.95%	89.53%
9		4	0	0	0	0	0	0	0	---	100.00%

Chronic Larval Fish Survival and Growth Test
Pacific EcoRisk

7d Survival Rate Detail
MD5: 8DB27BFD8A1D652B99280DF8F75308B1

Conc-g/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	1.000	1.000	1.000	1.000
0.75		1.000	1.000	1.000	1.000
1.5		0.800	1.000	1.000	0.900
3		0.500	0.500	0.900	0.600
6		0.300	0.500	0.200	0.200
9		0.000	0.000	0.000	0.000

Mean Dry Biomass-mg Detail
MD5: 88C951616D02D4B478DF1B79893116DA

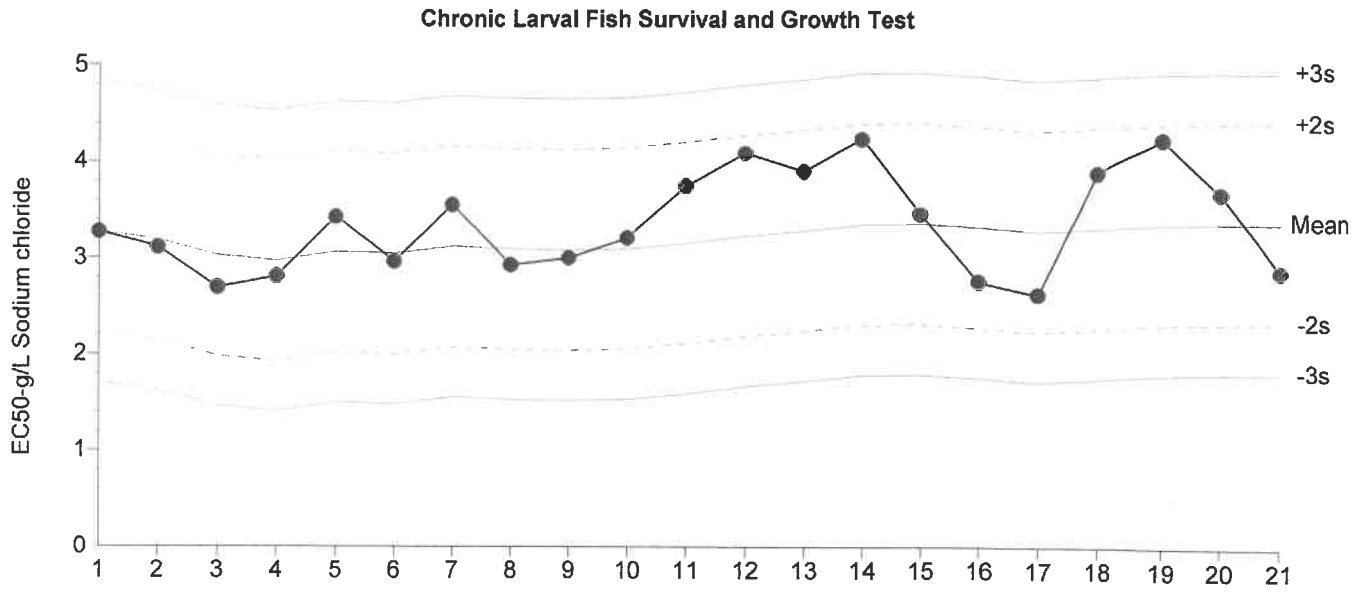
Conc-g/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	0.995	0.957	0.899	1.15
0.75		1.12	1.13	1.09	1.34
1.5		0.969	1	1.12	1.39
3		0.57	0.438	0.873	0.489
6		0.104	0.205	0.065	0.045
9		0	0	0	0

7d Survival Rate Binomials

Conc-g/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	10/10	10/10	10/10	10/10
0.75		10/10	10/10	10/10	10/10
1.5		8/10	10/10	10/10	9/10
3		5/10	5/10	9/10	6/10
6		3/10	5/10	2/10	2/10
9		0/10	0/10	0/10	0/10

Chronic Larval Fish Survival and Growth Test **Pacific EcoRisk**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Sodium chloride
Protocol:	EPA-821-R-02-013 (2002)	**Endpoint:**	7d Survival Rate	**Source:**	Reference Toxicant-REF



Mean:	3.38	**Count:**	20	**-2s Warning Limit:**	2.337	**-3s Action Limit:**	1.816
Sigma:	0.5211	**CV:**	15.40%	**+2s Warning Limit:**	4.422	**+3s Action Limit:**	4.943

Quality Control Data

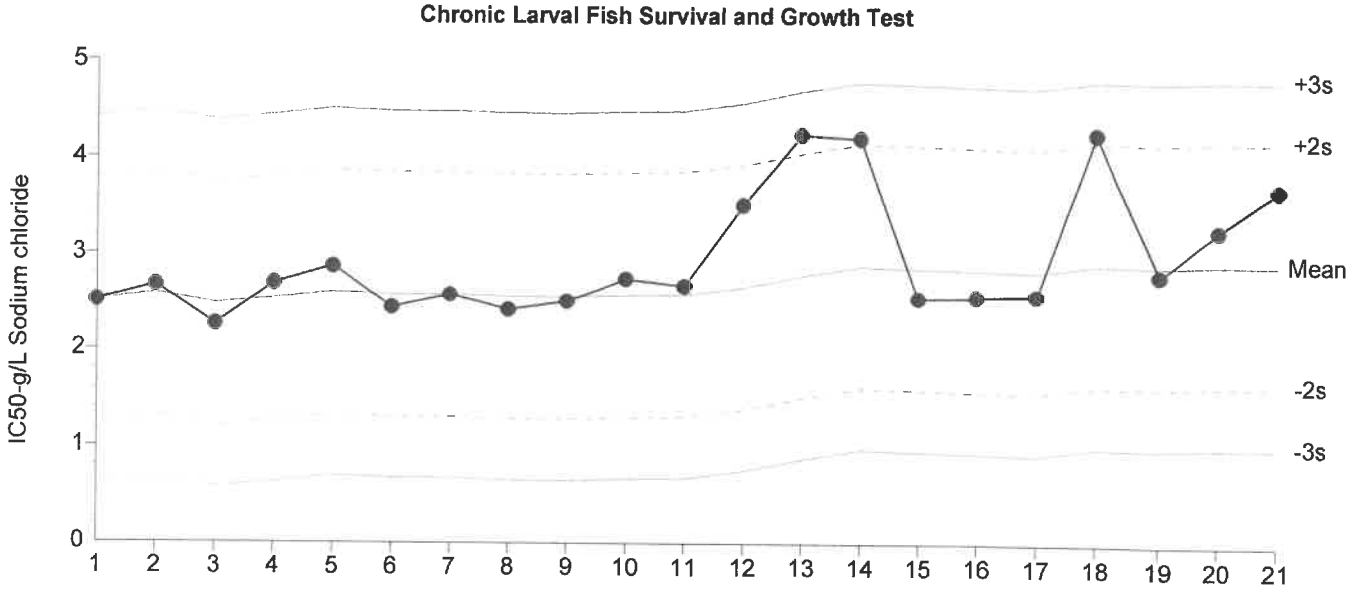
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2020	Jun	4	17:52	3.274	-0.1063	-0.204			06-0220-0480	06-7640-7465
2			16	14:31	3.112	-0.2681	-0.5145			02-7117-6821	13-7137-0153
3		Jul	3	16:25	2.692	-0.688	-1.32			17-4908-0528	17-0656-1928
4			7	16:09	2.807	-0.5734	-1.1			10-1674-6717	15-7508-4692
5			21	14:35	3.426	0.04573	0.08775			08-2856-6226	06-9494-1868
6			23	16:45	2.959	-0.4211	-0.8081			08-3721-3291	02-4775-1495
7			28	17:40	3.551	0.1711	0.3283			11-0804-4870	00-3914-3821
8		Aug	4	17:25	2.926	-0.4542	-0.8716			03-6035-3991	15-6247-7520
9			11	17:41	3	-0.38	-0.7292			10-2846-8086	15-4113-1038
10			18	17:35	3.209	-0.1712	-0.3284			07-6099-5831	06-8864-9587
11		Sep	1	15:50	3.744	0.3636	0.6977			08-6409-9851	08-0830-0074
12			9	17:23	4.087	0.7065	1.356			08-4538-1706	13-1121-6773
13			15	16:50	3.895	0.5151	0.9886			00-5580-1317	10-8593-3806
14			29	14:30	4.234	0.8541	1.639			15-7809-2046	02-5095-2279
15		Oct	6	15:35	3.458	0.07793	0.1496			02-4864-0296	09-0423-8367
16			7	16:15	2.763	-0.6166	-1.183			16-6042-7222	16-9454-7280
17			15	16:37	2.63	-0.7503	-1.44			20-5070-4236	21-0026-4955
18			20	16:50	3.895	0.5152	0.9886			05-7363-8482	19-7652-4389
19			27	14:44	4.245	0.8655	1.661			06-3969-9913	17-4195-5650
20			29	13:38	3.688	0.3082	0.5915			16-2263-7915	13-6494-1029
21		Nov	3	14:23	2.88	-0.4997	-0.959			06-7119-6013	19-4769-6926

CETIS QC Plot

Report Date: 13 Nov-20 11:51 (1 of 1)

Chronic Larval Fish Survival and Growth Test — Pacific EcoRisk

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Sodium chloride
Protocol:	EPA-821-R-02-013 (2002)	**Endpoint:**	Mean Dry Biomass-mg	**Source:**	Reference Toxicant-REF



Mean:	2.915	**Count:**	20	**-2s Warning Limit:**	1.646	**-3s Action Limit:**	1.011
Sigma:	0.6344	**CV:**	21.80%	**+2s Warning Limit:**	4.183	**+3s Action Limit:**	4.818

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2020	Jun	4	17:52	2.508	-0.4065	-0.6408			06-0220-0480	13-7415-8402
2			16	14:31	2.673	-0.2416	-0.3808			02-7117-6821	09-4361-9932
3		Jul	3	16:25	2.26	-0.6553	-1.033			17-4908-0528	10-6116-6684
4			7	16:09	2.692	-0.2228	-0.3513			10-1674-6717	01-0485-7276
5			21	14:35	2.87	-0.04542	-0.0716			08-2856-6226	11-6000-8992
6			23	16:45	2.439	-0.4765	-0.751			08-3721-3291	08-2730-7470
7			28	17:40	2.572	-0.3434	-0.5413			11-0804-4870	13-7816-0484
8		Aug	4	17:25	2.415	-0.4998	-0.7879			03-6035-3991	08-0130-3466
9			11	17:41	2.504	-0.4108	-0.6476			10-2846-8086	10-3295-0094
10			18	17:35	2.739	-0.1764	-0.2781			07-6099-5831	11-2590-9990
11		Sep	1	15:50	2.665	-0.2498	-0.3937			08-6409-9851	11-1594-7216
12			9	17:23	3.507	0.5923	0.9336			08-4538-1706	12-2360-6354
13			15	16:50	4.238	1.323	2.085	(+)		00-5580-1317	18-6800-8279
14			29	14:30	4.202	1.287	2.028	(+)		15-7809-2046	21-1952-0754
15		Oct	6	15:35	2.545	-0.3702	-0.5835			02-4864-0296	16-5498-3065
16			7	16:15	2.555	-0.3602	-0.5678			16-6042-7222	16-2978-5591
17			15	16:37	2.574	-0.3407	-0.537			20-5070-4236	12-0117-3154
18			20	16:50	4.259	1.344	2.119	(+)		05-7363-8482	14-8466-9892
19			27	14:44	2.804	-0.1112	-0.1753			06-3969-9913	00-0458-6323
20			29	13:38	3.271	0.3556	0.5606			16-2263-7915	13-2724-4343
21		Nov	3	14:23	3.692	0.7775	1.226			06-7119-6013	21-3775-2428

7 Day Chronic Fathead Minnow Reference Toxicant Test Data

Client: **Reference Toxicant**
Test Material: Sodium Chloride
Test ID#: 90250 Project #: 32262
Test Date: 10/29/20 Randomization: 4.6.14

Organism Log#: 12400 Age: 48hr
Organism Supplier: Aquatox
Control/Diluent: EPAMH
Control Water Batch: 2302

Treatment (g/L)	Temp (°C)	pH New	pH Old	D.O. (mg/L) New	D.O. (mg/L) Old	Cond. (µs/cm) New	Cond. (µs/cm) Old	# Live Organisms A	B	C	D	SIGN-OFF
Control	24.0	7.97		8.5		299		10	10	10	10	Date: 10/29/20
0.75	24.0	7.93		8.5		1715		10	10	10	10	Test Solution Prep: SR
1.5	24.0	7.91		8.4		3076		10	10	10	10	New WQ: BT
3	24.0	7.87		8.8		5958		10	10	10	10	Initiation Time: 1338
6	24.0	7.81		9.2		11260		10	10	10	10	Initiation Signoff: RG
9	24.1	7.77		9.9		16270		10	10	10	10	RT Stock Batch #: 466
Meter ID	105A	PH24		RD10		EC13						
Control	25.5	8.13	7.61	8.5	7.7	298	343	10	10	10	10	Date: 10/30/20
0.75	25.6	8.03	7.63	8.5	7.5	1687	1814	10	10	10	10	Test Solution Prep: TT
1.5	25.6	8.01	7.64	8.7	7.5	3238	3228	10	10	10	10	New WQ: EG
3	25.4	7.95	7.60	8.9	7.6	5977	6264	10	10	10	10	Renewal Time: 1142
6	25.4	7.88	7.54	9.4	7.7	11280	11670	10	10	10	10	Renewal Signoff: TG
9	25.1	7.84	7.50	9.8	7.7	16420	16530	7	9	3	0	Old WQ: EG
Meter ID	81A	PH15	PH24	RD13	RD11	EC12	EC14					RT Stock Batch #: 466
Control	24.6	8.03	7.56	8.4	6.8	296	347	10	10	10	10	Date: 10/31/20
0.75	25.7	7.99	7.56	8.9	6.8	1694	1903	10	10	10	10	Test Solution Prep: TT
1.5	25.6	7.95	7.51	9.0	7.0	3160	3320	10	10	10	10	New WQ:
3	26.1	7.97	7.57	9.2	7.4	6056	6351	10	10	10	10	Renewal Time: 1142
6	26.2	7.90	7.58	9.3	7.9	11300	11540	4	9	4	3	Renewal Signoff:
9	26.5	—	7.49	—	7.4	—	16760	0	0	0	0	Old WQ: AC
Meter ID	99A	PH26	PH26	RD14	RD14	EC12	EC11					RT Stock Batch #: 464
Control	24.2	8.14	7.69	8.8	6.9	293	322	10	10	10	10	Date: 11/1/20
0.75	25.5	8.08	7.69	9.0	7.2	1709	1739	10	10	10	10	Test Solution Prep: KC
1.5	25.9	8.05	7.64	9.0	7.3	3239	3466	10	10	10	10	New WQ: RL
3	25.9	7.99	7.62	9.1	7.3	6040	5926	10	9	10	9	Renewal Time: 1253
6	26.6	7.90	7.54	9.4	7.1	11120	10690	3	7	3	3	Renewal Signoff: BT
9	—	—	—	—	—	—	—	—	—	—	—	Old WQ: KG
Meter ID	81A	PH26	PH15	RD14	RD10	EC13	EC11					RT Stock Batch #: 466

7 Day Chronic Fathead Minnow Reference Toxicant Test Data

Client: **Reference Toxicant**
Test Material: Sodium Chloride
Test ID#: 90250 Project #: 32262
Test Date: 10/29/20 Randomization: 4.6.14

Organism Log#: 12400 Age: 48hr
Organism Supplier: Aquatox
Control/Diluent: EPAMH
Control Water Batch: 2302

Treatment (g/L)	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Cond. (µs/cm) New	Cond. (µs/cm) Old	# Live Organisms A	B	C	D	SIGN-OFF
Control	24.9	8.01	7.66	8.8	7.9	295	321	10	10	10	10	Date: 11/2/20
0.75	26.7	8.01	7.69	8.8	7.9	1729	1805	10	10	10	10	Test Solution Prep: BT
1.5	26.9	8.00	7.75	9.0	8.0	3235	4290	10	10	10	10	New WQ: DKB
3	26.6	7.99	7.67	9.1	7.9	5957	6663	9	9	10	9	Renewal Time: 1350
6	26.5	7.92	7.60	9.4	7.8	11230	11780	3	7	3	2	Renewal Signoff: BT
9	–	–	–	–	–	–	–	–	–	–	–	Old WQ: MD
Meter ID	54A	pH25	PH25	RD13	RD13	EC14	EC13					RT Stock Batch #: 4606
Control	25.0	8.02	7.69	8.6	6.5	308	399	10	10	10	10	Date: 11/3/20
0.75	25.4	7.99	7.63	8.6	7.2	1760	1822	10	10	10	10	Test Solution Prep: KA
1.5	25.4	7.95	7.64	8.8	7.4	3233	3308	10	10	10	10	New WQ: EG
3	25.1	7.89	7.58	9.0	7.7	5930	6290 3326 Ac 11/3/20	8	9	9	8	Renewal Time: 1325
6	24.9	7.80	7.58	9.4	7.7	11160	11760	3	7	2	2	Renewal Signoff: MB
9	–	–	–	–	–	–	–	–	–	–	–	Old WQ: AC
Meter ID	54A	PH24	7.60	RD13	RD10	EC13	EC12					RT Stock Batch #: 466
Control	25.9	7.95	7.54	9.6	8.1	3090	342	10	10	10	10	Date: 11/4/20
0.75	25.9	7.99	7.70	9.7	7.9	1795	2003	10	10	10	10	Test Solution Prep: MB
1.5	25.8	7.96	7.70	9.9	7.9	3302	3818	10	10	10	9	New WQ: BT
3	25.7	7.91	7.67	9.9	7.9	6113	6778	7	9	9	8	Renewal Time: 1205
6	25.3	7.72	7.57	9.1	7.6	11530	12400	3	6	2	2	Renewal Signoff: MB
9	–	–	–	–	–	–	–	–	–	–	–	Old WQ: AA
Meter ID	48A	PH15	PH25	RD13	RD13	EC11	EC11					RT Stock Batch #: 406
Control	25.3		7.71		7.0		398	10	10	10	10	Date: 11/5/20
0.75	25.6		7.60		7.0		2021	10	10	10	10	Termination Time: 0950
1.5	25.5		7.46		6.7		3385	8	10	10	9	Termination Signoff: KA
3	25.6		7.44		6.9		6116	5	5	9	6	Old WQ: KA
6	25.6		7.44		7.3		11420	3	5	2	2	
9	–		–		–		–	–	–	–	–	
Meter ID	48A		PH24		RD13		EC11					

Fathead Minnow Dry Weight Data Sheet

Client: **Reference Toxicant** Test ID #: 90250 Project #: 32262

Sample: Sodium Chloride Tare Weight Date: 11/11/20 Sign-off: [illegible]

Test Date: 10/29/20 Final Weight Date: 11/12/20 Sign-off: BT

Pan ID	Concentration (g/L)	Replicate	Initial Pan Weight (mg)	Final Pan Weight (mg)	Initial # of Organisms	Biomass Value (mg)
1	Control	A	411.10	421.05	10	
2		B	410.97	420.54	10	
3		C	410.52	419.51	10	
4		D	411.19	422.70	10	
5	0.75	A	413.52	424.76	10	
6		B	414.07	425.39	10	
7		C	408.22	419.16	10	
8		D	409.34	422.70	10	
9	1.5	A	413.97	423.66	10	
10		B	412.38	422.39	10	
11		C	410.98	422.19	10	
12		D	407.00	420.97	10	
13	3	A	413.03	418.73	10	
14		B	406.15	410.53	10	
15		C	413.67	422.40	10	
16		D	408.71	413.60	10	
17	6	A	413.90	414.94	10	
18		B	408.81	410.96	10	
19		C	408.55	409.20	10	
20		D	415.49	415.94	10	
21	9	A	411.11	—	10	
22		B	410.62	—	10	
23		C	409.25	—	10	
24		D	403.46	—	10	
QA1			410.65	410.69		
QA2			397.38	397.39		
QA3			401.08	401.06		
Balance ID:			BAL04	BAL04		

November 25, 2020

Eric Davis
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

TEL:
FAX:

Workorder No.: N043135

RE: SFPP Norwalk

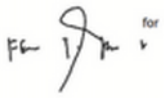
Attention: Eric Davis

Enclosed are the results for sample(s) received on November 23, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,



Nancy Sibucao
Laboratory Director

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CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N043135

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

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

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

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:

Matrix Spike (MS) is outside recovery criteria on analyte Tert-Butanol possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

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

CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N043135
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N043135-001A	EFF-112320	Water	11/23/2020 12:00:00 PM	11/23/2020	11/25/2020
N043135-001B	EFF-112320	Water	11/23/2020 12:00:00 PM	11/23/2020	11/25/2020
N043135-001C	EFF-112320	Water	11/23/2020 12:00:00 PM	11/23/2020	11/25/2020
N043135-001D	EFF-112320	Water	11/23/2020 12:00:00 PM	11/23/2020	11/25/2020
N043135-001E	EFF-112320	Water	11/23/2020 12:00:00 PM	11/23/2020	11/25/2020

CLIENT: CH2MHill
Lab Order: N043135
Project: SFPP Norwalk
Lab ID: N043135-001

Client Sample ID: EFF-112320
Collection Date: 11/23/2020 12:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **NV00922-MS9_201124B** QC Batch: **83157**				PrepDate:	**11/24/2020**		Analyst: **PL**
Phenol	ND	0.33	1.0		µg/L	1	11/24/2020 06:01 PM
Surr: Phenol-d5	33.0	0	25-108		%REC	1	11/24/2020 06:01 PM
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **CA01638-MS08_201124A** QC Batch: **R20VW029**				PrepDate:			Analyst: **AW**
1,1-Dichloroethane	ND	0.22	0.50		ug/L	1	11/24/2020 12:56 PM
1,2-Dichloroethane	ND	0.16	0.50		ug/L	1	11/24/2020 12:56 PM
Benzene	ND	0.11	1.0		ug/L	1	11/24/2020 12:56 PM
Ethylbenzene	ND	0.11	1.0		ug/L	1	11/24/2020 12:56 PM
m,p-Xylene	ND	0.23	1.0		ug/L	1	11/24/2020 12:56 PM
MTBE	ND	0.44	1.0		ug/L	1	11/24/2020 12:56 PM
o-Xylene	ND	0.087	1.0		ug/L	1	11/24/2020 12:56 PM
Tert-Butanol	ND	2.8	5.0		ug/L	1	11/24/2020 12:56 PM
Toluene	ND	0.13	2.0		ug/L	1	11/24/2020 12:56 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	11/24/2020 12:56 PM
Surr: 1,2-Dichloroethane-d4	110	0	72-119		%REC	1	11/24/2020 12:56 PM
Surr: 4-Bromofluorobenzene	90.7	0	76-119		%REC	1	11/24/2020 12:56 PM
Surr: Dibromofluoromethane	96.5	0	85-115		%REC	1	11/24/2020 12:56 PM
Surr: Toluene-d8	95.1	0	81-120		%REC	1	11/24/2020 12:56 PM
TPH EXTRACTABLE BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **NV00922-GC1_201124B** QC Batch: **83155**				PrepDate:	**11/24/2020**		Analyst: **PL**
TPH-Diesel (C13-C22)	ND	15	25		ug/L	1	11/24/2020 08:45 PM
TPH-Oil (C23-C36)	17	14	25	J	ug/L	1	11/24/2020 08:45 PM
Surr: Octacosane	88.5	0	26-152		%REC	1	11/24/2020 08:45 PM
Surr: p-Terphenyl	86.9	0	57-132		%REC	1	11/24/2020 08:45 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **NV00922-GC4_201124A** QC Batch: **E20VW117**				PrepDate:			Analyst: **BH**
TPH-Gasoline (C4-C12)	58	21	50		ug/L	1	11/24/2020 02:33 PM
Surr: Chlorobenzene - d5	97.1	0	74-138		%REC	1	11/24/2020 02:33 PM

Qualifiers:

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

CLIENT:	CH2MHill	**Client Sample ID:**	EFF-112320
Lab Order:	N043135	**Collection Date:**	11/23/2020 12:00:00 PM
Project:	SFPP Norwalk	**Matrix:**	WATER
Lab ID:	N043135-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA2_201124A** QC Batch: **83148**				PrepDate:	**11/24/2020**		Analyst: **DJ**
Mercury	ND	0.018	0.050		µg/L	1	11/24/2020 11:27 AM
TOTAL METALS BY ICPMS							
EPA 200.8							
RunID: **NV00922-ICP8_201124A** QC Batch: **83145**				PrepDate:	**11/24/2020**		Analyst: **CEI**
Copper	ND	0.26	0.50		µg/L	1	11/24/2020 01:35 PM
Lead	ND	0.13	0.50		µg/L	1	11/24/2020 01:35 PM
Zinc	1.4	0.27	1.0		µg/L	1	11/24/2020 01:35 PM
TOTAL TPH							
EPA 8015B							
RunID: **NV00922-GC1_201124B** QC Batch: **R148965**				PrepDate:			Analyst: **PL**
Total TPH	75	21	100	J	ug/L	1	11/24/2020

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

CLIENT: CH2MHill
Work Order: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **MB-83145** SampType: **MBLK** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **11/24/2020** RunNo: **148971**
Client ID: **PBW** Batch ID: **83145** TestNo: **EPA 200.8** Analysis Date: **11/24/2020** SeqNo: **4016870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50									
Lead	ND	0.50									
Zinc	ND	1.0									

Sample ID: **LCS-83145** SampType: **LCS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **11/24/2020** RunNo: **148971**
Client ID: **LCSW** Batch ID: **83145** TestNo: **EPA 200.8** Analysis Date: **11/24/2020** SeqNo: **4016871**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	9.732	0.50	10.00	0	97.3	85	115				
Lead	9.864	0.50	10.00	0	98.6	85	115				
Zinc	108.010	1.0	100.0	0	108	85	115				

Sample ID: **N043135-001D-DUP** SampType: **DUP** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **11/24/2020** RunNo: **148971**
Client ID: **ZZZZZZ** Batch ID: **83145** TestNo: **EPA 200.8** Analysis Date: **11/24/2020** SeqNo: **4016874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50						0	0	20	
Lead	ND	0.50						0	0	20	
Zinc	1.440	1.0						1.408	2.25	20	

Sample ID: **N043135-001D-MS** SampType: **MS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **11/24/2020** RunNo: **148971**
Client ID: **ZZZZZZ** Batch ID: **83145** TestNo: **EPA 200.8** Analysis Date: **11/24/2020** SeqNo: **4016876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	8.541	0.50	10.00	0	85.4	75	125				
Lead	9.972	0.50	10.00	0	99.7	75	125				
Zinc	103.731	1.0	100.0	1.408	102	75	125				

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: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **N043135-001D-MSD** SampType: **MSD** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **11/24/2020** RunNo: **148971**
Client ID: **ZZZZZZ** Batch ID: **83145** TestNo: **EPA 200.8** Analysis Date: **11/24/2020** SeqNo: **4016877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	8.588	0.50	10.00	0	85.9	75	125	8.541	0.550	20	
Lead	9.975	0.50	10.00	0	99.8	75	125	9.972	0.0326	20	
Zinc	103.757	1.0	100.0	1.408	102	75	125	103.7	0.0250	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

CLIENT: CH2MHill
Work Order: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Sample ID: **MB-83148**	SampType: **MBLK**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **11/24/2020**	RunNo: **148943**
Client ID: **PBW**	Batch ID: **83148**	TestNo: **EPA 245.1**		Analysis Date: **11/24/2020**	SeqNo: **4015909**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050									

Sample ID: **LCS-83148**	SampType: **LCS**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **11/24/2020**	RunNo: **148943**
Client ID: **LCSW**	Batch ID: **83148**	TestNo: **EPA 245.1**		Analysis Date: **11/24/2020**	SeqNo: **4015911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.310	0.050	2.500	0	92.4	85	115				

Sample ID: **N043135-001D-DUP**	SampType: **DUP**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **11/24/2020**	RunNo: **148943**
Client ID: **ZZZZZZ**	Batch ID: **83148**	TestNo: **EPA 245.1**		Analysis Date: **11/24/2020**	SeqNo: **4015914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050						0	0	20	

Sample ID: **N043135-001D-MS**	SampType: **MS**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **11/24/2020**	RunNo: **148943**
Client ID: **ZZZZZZ**	Batch ID: **83148**	TestNo: **EPA 245.1**		Analysis Date: **11/24/2020**	SeqNo: **4015916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.380	0.050	2.500	0	95.2	75	125				

Sample ID: **N043135-001D-MSD**	SampType: **MSD**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **11/24/2020**	RunNo: **148943**
Client ID: **ZZZZZZ**	Batch ID: **83148**	TestNo: **EPA 245.1**		Analysis Date: **11/24/2020**	SeqNo: **4015917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.370	0.050	2.500	0	94.8	75	125	2.380	0.421	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

CLIENT: CH2MHill
Work Order: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: **MB-83155**	SampType: **MBLK**	TestCode: **8015_W_FP_**	Units: **ug/L**	Prep Date: **11/24/2020**	RunNo: **148965**
Client ID: **PBW**	Batch ID: **83155**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **11/24/2020**	SeqNo: **4016569**

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)	17.285	25									J
Surr: Octacosane	57.109		80.00		71.4	26	152				
Surr: p-Terphenyl	56.863		80.00		71.1	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

CLIENT: CH2MHill
Work Order: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: **MB-R148965** SampType: **MBLK** TestCode: **8015_W_SFP** Units: **ug/L** Prep Date: RunNo: **148965**
Client ID: **PBW** Batch ID: **R148965** TestNo: **EPA 8015B** Analysis Date: **11/24/2020** SeqNo: **4017082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	61.285	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

CLIENT: CH2MHill
Work Order: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Sample ID: **E201124LCS** SampType: **LCS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **148952**
Client ID: **LCSW** Batch ID: **E20VW117** TestNo: **EPA 8015B** Analysis Date: **11/24/2020** SeqNo: **4016176**

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				
Surr: Chlorobenzene - d5	43084.000		50000		86.2	74	138				

Sample ID: **E201124MB** SampType: **MBLK** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **148952**
Client ID: **PBW** Batch ID: **E20VW117** TestNo: **EPA 8015B** Analysis Date: **11/24/2020** SeqNo: **4016177**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	44.000	50									J
Surr: Chlorobenzene - d5	47285.000		50000		94.6	74	138				

Sample ID: **N043124-002BMS** SampType: **MS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **148952**
Client ID: **ZZZZZZ** Batch ID: **E20VW117** TestNo: **EPA 8015B** Analysis Date: **11/24/2020** SeqNo: **4016179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1254.000	50	1000	120.0	113	67	136				
Surr: Chlorobenzene - d5	44263.000		50000		88.5	74	138				

Sample ID: **N043124-002BMSD** SampType: **MSD** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **148952**
Client ID: **ZZZZZZ** Batch ID: **E20VW117** TestNo: **EPA 8015B** Analysis Date: **11/24/2020** SeqNo: **4016180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1280.000	50	1000	120.0	116	67	136	1254	2.05	30	
Surr: Chlorobenzene - d5	51369.000		50000		103	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: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **R201124-LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148950**
Client ID: **LCSW** Batch ID: **R20VW029** TestNo: **EPA 8260B** Analysis Date: **11/24/2020** SeqNo: **4016342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	19.340	0.50	20.00	0	96.7	69	133				
1,2-Dichloroethane	22.530	0.50	20.00	0	113	69	132				
Benzene	19.660	1.0	20.00	0	98.3	81	122				
Ethylbenzene	20.780	1.0	20.00	0	104	73	127				
m,p-Xylene	44.150	1.0	40.00	0	110	76	128				
MTBE	18.310	1.0	20.00	0	91.6	65	123				
o-Xylene	20.590	1.0	20.00	0	103	80	121				
Tert-Butanol	102.370	5.0	100.0	0	102	70	130				
Toluene	19.930	2.0	20.00	0	99.7	77	122				
Xylenes, Total	64.740	2.0	60.00	0	108	75	125				
Surr: 1,2-Dichloroethane-d4	28.180		25.00		113	72	119				
Surr: 4-Bromofluorobenzene	26.680		25.00		107	76	119				
Surr: Dibromofluoromethane	24.860		25.00		99.4	85	115				
Surr: Toluene-d8	25.380		25.00		102	81	120				

Sample ID: **N043124-008A-MS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148950**
Client ID: **ZZZZZZ** Batch ID: **R20VW029** TestNo: **EPA 8260B** Analysis Date: **11/24/2020** SeqNo: **4016343**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	18.150	0.50	20.00	0	90.8	69	133				
1,2-Dichloroethane	20.580	0.50	20.00	0	103	69	132				
Benzene	18.960	1.0	20.00	0	94.8	81	122				
Ethylbenzene	20.620	1.0	20.00	0	103	73	127				
m,p-Xylene	43.670	1.0	40.00	0	109	76	128				
MTBE	17.090	1.0	20.00	1.600	77.4	65	123				
o-Xylene	20.160	1.0	20.00	0	101	80	121				
Tert-Butanol	95.450	5.0	100.0	27.42	68.0	70	130				S
Toluene	19.160	2.0	20.00	0	95.8	77	122				
Xylenes, Total	63.830	2.0	60.00	0	106	75	125				
Surr: 1,2-Dichloroethane-d4	25.630		25.00		103	72	119				

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: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **N043124-008A-MS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148950**
Client ID: **ZZZZZZ** Batch ID: **R20VW029** TestNo: **EPA 8260B** Analysis Date: **11/24/2020** SeqNo: **4016343**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	27.000		25.00		108	76	119				
Surr: Dibromofluoromethane	23.860		25.00		95.4	85	115				
Surr: Toluene-d8	25.850		25.00		103	81	120				

Sample ID: **N043124-008A-MSD** SampType: **MSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148950**
Client ID: **ZZZZZZ** Batch ID: **R20VW029** TestNo: **EPA 8260B** Analysis Date: **11/24/2020** SeqNo: **4016344**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	17.460	0.50	20.00	0	87.3	69	133	18.15	3.88	20	
1,2-Dichloroethane	20.950	0.50	20.00	0	105	69	132	20.58	1.78	20	
Benzene	18.320	1.0	20.00	0	91.6	81	122	18.96	3.43	20	
Ethylbenzene	19.510	1.0	20.00	0	97.6	73	127	20.62	5.53	20	
m,p-Xylene	41.540	1.0	40.00	0	104	76	128	43.67	5.00	20	
MTBE	18.330	1.0	20.00	1.600	83.7	65	123	17.09	7.00	20	
o-Xylene	19.740	1.0	20.00	0	98.7	80	121	20.16	2.11	20	
Tert-Butanol	117.940	5.0	100.0	27.42	90.5	70	130	95.45	21.1	20	R
Toluene	18.250	2.0	20.00	0	91.2	77	122	19.16	4.87	20	
Xylenes, Total	61.280	2.0	60.00	0	102	75	125	63.83	4.08	20	
Surr: 1,2-Dichloroethane-d4	25.790		25.00		103	72	119		0		
Surr: 4-Bromofluorobenzene	26.130		25.00		105	76	119		0		
Surr: Dibromofluoromethane	23.500		25.00		94.0	85	115		0		
Surr: Toluene-d8	24.440		25.00		97.8	81	120		0		

Sample ID: **R201124-MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148950**
Client ID: **PBW** Batch ID: **R20VW029** TestNo: **EPA 8260B** Analysis Date: **11/24/2020** SeqNo: **4016345**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
Benzene	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

CLIENT: CH2MHill
Work Order: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **R201124-MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **148950**
Client ID: **PBW** Batch ID: **R20VW029** TestNo: **EPA 8260B** Analysis Date: **11/24/2020** SeqNo: **4016345**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
MTBE	ND	1.0									
o-Xylene	ND	1.0									
Tert-Butanol	ND	5.0									
Toluene	ND	2.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	28.990		25.00		116	72	119				
Surr: 4-Bromofluorobenzene	23.650		25.00		94.6	76	119				
Surr: Dibromofluoromethane	26.090		25.00		104	85	115				
Surr: Toluene-d8	25.800		25.00		103	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

CLIENT: CH2MHill
Work Order: N043135
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270WATER_SIMEXT

Sample ID: **LCS-83157**	SampType: **LCS**	TestCode: **8270WATER_**	Units: **µg/L**	Prep Date: **11/24/2020**	RunNo: **148948**
Client ID: **LCSW**	Batch ID: **83157**	TestNo: **EPA 8270C**	**EPA 3510C**	Analysis Date: **11/24/2020**	SeqNo: **4016053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	2.740	1.0	6.000	0	45.7	24	120				
Surr: Phenol-d5	0.350		1.000		35.0	25	108				

Sample ID: **LCSD-83157**	SampType: **LCSD**	TestCode: **8270WATER_**	Units: **µg/L**	Prep Date: **11/24/2020**	RunNo: **148948**
Client ID: **LCSS02**	Batch ID: **83157**	TestNo: **EPA 8270C**	**EPA 3510C**	Analysis Date: **11/24/2020**	SeqNo: **4016054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	2.760	1.0	6.000	0	46.0	24	120	2.740	0.727	20	
Surr: Phenol-d5	0.350		1.000		35.0	25	108		0		

Sample ID: **MB-83157**	SampType: **MBLK**	TestCode: **8270WATER_**	Units: **µg/L**	Prep Date: **11/24/2020**	RunNo: **148948**
Client ID: **PBW**	Batch ID: **83157**	TestNo: **EPA 8270C**	**EPA 3510C**	Analysis Date: **11/24/2020**	SeqNo: **4016075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	1.0									
Surr: Phenol-d5	0.360		1.000		36.0	25	108				

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

N043135

Asset Laboratories
3151 W. Post Road
Las Vegas, NV 89118
Tel: 702-307-2659 Fax: 702-307-2691
Marion Cartin (marion@assetlaboratories.com)

CHAIN OF CUSTODY RECORD

DATE: 11/23/20
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: Ryan Koch	Report To: Eric Davis	Attention: Ryan Koch - Ref. AFE# 81195	Sampler Name: James Dye
Address: 1001 Louisiana St., Houston, TX 77002	Copy To: Ryan Koch	Company Name: Kinder Morgan Energy Partners	Sampler Signature: [signature]
Email To: Ryan_Koch@kindermorgan.com eric.davis@jacobs.com; nils.orliczky@jacobs.com	Purchase Order No.:	Address: 1001 Louisiana St., Houston, TX 77002	Sample Date: 11/23/20
Phone 713-420-6730 Fax 714-560-4801	Project Name: SFPP Norwalk	ATL Project Manager: Marion Cartin	

Section E Required Sample Information

									V	V	A	P	A	
							CONTAINER TYPE		V	V	A	P	A	
							# OF CONTAINERS		3	3	3	1	2	
							PRESERVATIVE		H	H	--	N	--	
							VOLUME (mL)		40	40	1000	500	1000	
ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS	Analysis Test	BTEX, 1,1-DCA, 1,2-DCA, MTBE, TBA (8260B)	TPH-gas (C4-C12) (8015B)	TPH-d (C13-C22), TPH-oil (C23+), Total TPH (8015B)	Cu, Pb, Zn (200.8); Hg (245.1)	Phenol (8270)	Comments
1	EFF-112320	EFFLUENT	W	G	11/23/20	1200	12		X	X	X	X	X	N043135-01
2														Report metals, TPH and VOC preliminary data on 24-hr TAT
3														Report total Xylenes
4														
5														
6														
7														
8														
9														
10														

Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
[signature]	11/23/20 1230	[signature] THAO	11/23/20 2:30
[signature] THAO	11/23/20 1630	[signature] A. DASILVA	11/23/20 1630
[signature] A. DASILVA	11/23/20 1800	Bellys Hernandez BHz	11/24/20 9:00am

Turn Around Time (TAT):
- ☐A = Same Day
- ☑B = 24 Hours
- ☐C = 48 Hours
- ☐D = 72 Hours
- ☑E = 5 Workdays
- ☐E = 10 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instruction:
Las Vegas
2.4°C IR#2
GSO #9502

CA: 2.2°C IR #1 COOLER/ICE ASSET

Matrix:		
W = Water	WW = Wastewater	
O = Oil	P = Product	S = Soil
Others/Specify:		

Preservatives:		
H = HCl	N = HNO3	S = H2SO4
Z = Zn(AC)2	O = NaOH	T = Na2S2O3
Others/Specify:		

Container Type:			
T = Tube	V = VOA	P = Pint	A = Amber
J = Jar	B = Tedlar	G = Glass	
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:	11/23/2020	Workorder:	N043135
Rep sample Temp (Deg C):	2.2	IR Gun ID:	1
Temp Blank:	☐ Yes ☑ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

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

Comments: Received at Las Vegas Lab on 11/24/20 at 2.4 oC, IR# 2, GSO# 9502.

For:

Checklist Completed By: AD BHdez 11/24/2020

Reviewed By: MBC 11/24/2020

ASSET Laboratories

WORK ORDER Summary

24-Nov-20

WorkOrder: N043135

Client ID: CH2HI03

Project: SFPP Norwalk **QC Level:** RTNE **Date Received:** 11/23/2020

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N043135-001A	EFF-112320	11/23/2020 12:00:00 PM	11/25/2020	Water	EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	V-CA
N043135-001B			11/25/2020		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	☐	☐	☐	VW
N043135-001C			11/25/2020		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	☐	☐	☐	WW
			11/25/2020		EPA 8015B	TPH EXTRACTABLE BY GC/FID	☐	☐	☐	WW
			11/25/2020		EPA 8015B	Total TPH	☐	☐	☐	WW
N043135-001D			11/25/2020			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			11/25/2020		EPA 200.8	TOTAL METALS BY ICPMS	☐	☐	☐	WW
			11/25/2020		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			11/25/2020			MERCURY PREP	☐	☐	☐	WW
N043135-001E			12/1/2020		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: 8270C - SIM	☐	☐	☐	WW
			12/1/2020		EPA 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	WW
N043135-002A	FOLDER	11/25/2020	11/25/2020		Folder	Folder	☐	☐	☐	LAB
			11/25/2020		Folder	Folder	☐	☐	☐	LAB

GLS

800-322-5555
www.gls-us.com

Ship From
ASSET LABORATORIES
THAD MALIT
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Ship To
ASSET LABORATORIES
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

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

Delivery Instructions:
HOLD FOR PICKUP
Signature Type: STANDARD

Tracking #: 551289502

CPS

LAS VEGAS

C89102A

31311612

LVS NV891-A 1

Print Date: 11/23/2020 5:20 PM

Package 1 of 2

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

2-4°C

December 22, 2020

Eric Davis
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

TEL:
FAX:

Workorder No.: N043364

RE: SFPP Norwalk

Attention: Eric Davis

Enclosed are the results for sample(s) received on December 08, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Nancy Sibucao
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 ASSET Laboratories - Las Vegas.

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

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

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

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.

Ammonia and BOD was subcontracted to BC Laboratories, Bakersfield CA

Analytical comments for EPA 200.8:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria on analyte Lead possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N043364
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N043364-001A	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001B	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001C	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001D	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001E	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001F	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001G	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001H	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001I	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001J	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020
N043364-001K	EFF-120820	Wastewater	12/8/2020 11:45:00 AM	12/8/2020	12/22/2020

CLIENT: CH2MHill
Lab Order: N043364
Project: SFPP Norwalk
Lab ID: N043364-001

Client Sample ID: EFF-120820
Collection Date: 12/8/2020 11:45:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
			SM2540D				
RunID: **CA01638-WC01_201209B** QC Batch: **83387**				PrepDate:		**12/9/2020**	Analyst: **AG**
Suspended Solids (Residue, Non-Filterable)	ND	5.0	5.0		mg/L	1	12/9/2020 09:49 AM
SETTLEABLE MATTER							
			SM2540F				
RunID: **CA01638-WC01_201209A** QC Batch: **83452**				PrepDate:		**12/9/2020**	Analyst: **AG**
Settleable Matter	ND	0.10	0.10		ml/L	1	12/9/2020 09:17 AM
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_201210F** QC Batch: **R149313**				PrepDate:			Analyst: **LR**
Turbidity	0.29	0.10	0.10		NTU	1	12/10/2020 08:50 AM
HEXANE EXTRACTABLE MATERIAL (HEM)							
			EPA 1664 _HEM REV B				
RunID: **NV00922-WC_201210D** QC Batch: **83419**				PrepDate:		**12/10/2020**	Analyst: **LR**
Oil & Grease	1.0	0.57	4.0	J	mg/L	1	12/10/2020 01:50 PM
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 3510C				**EPA 8270C**
RunID: **NV00922-MS3_201218A** QC Batch: **83474**				PrepDate:		**12/14/2020**	Analyst: **PL**
Phenol	ND	0.33	1.0		µg/L	1	12/18/2020 03:33 PM
Surr: Phenol-d5	25.0	0	25-108		%REC	1	12/18/2020 03:33 PM
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **CA01638-MS08_201209A** QC Batch: **R20VW035**				PrepDate:			Analyst: **AW**
1,1-Dichloroethane	ND	0.22	0.50		ug/L	1	12/9/2020 11:52 AM
1,2-Dichloroethane	ND	0.16	0.50		ug/L	1	12/9/2020 11:52 AM
Benzene	ND	0.11	1.0		ug/L	1	12/9/2020 11:52 AM
Ethylbenzene	ND	0.11	1.0		ug/L	1	12/9/2020 11:52 AM
m,p-Xylene	ND	0.23	1.0		ug/L	1	12/9/2020 11:52 AM
MTBE	ND	0.44	1.0		ug/L	1	12/9/2020 11:52 AM
o-Xylene	ND	0.087	1.0		ug/L	1	12/9/2020 11:52 AM
Tert-Butanol	ND	2.8	5.0		ug/L	1	12/9/2020 11:52 AM
Toluene	ND	0.13	2.0		ug/L	1	12/9/2020 11:52 AM
Xylenes, Total	ND	1.5	2.0		ug/L	1	12/9/2020 11:52 AM

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

CLIENT: CH2MHill
Lab Order: N043364
Project: SFPP Norwalk
Lab ID: N043364-001

Client Sample ID: EFF-120820
Collection Date: 12/8/2020 11:45:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **CA01638-MS08_201209A** QC Batch: **R20VW035**				PrepDate:			Analyst: **AW**
Surr: 1,2-Dichloroethane-d4	110	0	72-119		%REC	1	12/9/2020 11:52 AM
Surr: 4-Bromofluorobenzene	94.8	0	76-119		%REC	1	12/9/2020 11:52 AM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	12/9/2020 11:52 AM
Surr: Toluene-d8	101	0	81-120		%REC	1	12/9/2020 11:52 AM
TPH EXTRACTABLE BY GC/FID							
	EPA 3510C		**EPA 8015B**				
RunID: **NV00922-GC1_201210A** QC Batch: **83377**				PrepDate:		**12/9/2020**	Analyst: **PL**
TPH-Diesel (C13-C22)	20	15	25	J	ug/L	1	12/10/2020 12:41 PM
TPH-Oil (C23-C36)	29	14	25		ug/L	1	12/10/2020 12:41 PM
Surr: Octacosane	91.9	0	26-152		%REC	1	12/10/2020 12:41 PM
Surr: p-Terphenyl	87.7	0	57-132		%REC	1	12/10/2020 12:41 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **NV00922-GC4_201209A** QC Batch: **E20VW123**				PrepDate:			Analyst: **BH**
TPH-Gasoline (C4-C12)	42	21	50	J	ug/L	1	12/9/2020 12:12 PM
Surr: Chlorobenzene - d5	107	0	74-138		%REC	1	12/9/2020 12:12 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA2_201210B** QC Batch: **83410**				PrepDate:		**12/10/2020**	Analyst: **DJ**
Mercury	ND	0.018	0.050		µg/L	1	12/10/2020 03:36 PM
TOTAL METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_201209B** QC Batch: **83376**				PrepDate:		**12/9/2020**	Analyst: **CEI**
Copper	ND	0.26	0.50		µg/L	1	12/9/2020 06:32 PM
Lead	ND	0.13	0.50		µg/L	1	12/9/2020 06:32 PM
Zinc	2.3	0.27	1.0		µg/L	1	12/10/2020 02:47 PM
TOTAL TPH							
			EPA 8015B				
RunID: **NV00922-GC1_201210A** QC Batch: **R149317**				PrepDate:			Analyst: **PL**
Total TPH	91	21	100	J	ug/L	1	12/10/2020

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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.2_2540D_W

Sample ID: **MB-83387**	SampType: **MBLK**	TestCode: **160.2_2540D_**	Units: **mg/L**	Prep Date: **12/9/2020**	RunNo: **149333**
Client ID: **PBW**	Batch ID: **83387**	TestNo: **SM2540D**		Analysis Date: **12/9/2020**	SeqNo: **4036830**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filterab	ND	10									

Sample ID: **LCS-83387**	SampType: **LCS**	TestCode: **160.2_2540D_**	Units: **mg/L**	Prep Date: **12/9/2020**	RunNo: **149333**
Client ID: **LCSW**	Batch ID: **83387**	TestNo: **SM2540D**		Analysis Date: **12/9/2020**	SeqNo: **4036831**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filterab	975.000	10	1000	0	97.5	80	120				

Sample ID: **N043359-001B-DUP**	SampType: **DUP**	TestCode: **160.2_2540D_**	Units: **mg/L**	Prep Date: **12/9/2020**	RunNo: **149333**
Client ID: **ZZZZZZ**	Batch ID: **83387**	TestNo: **SM2540D**		Analysis Date: **12/9/2020**	SeqNo: **4036834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filterab	ND	5.0						0	0	5	

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: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.5_2540F_W

Sample ID: **MB-83452**	SampType: **MBLK**	TestCode: **160.5_2540F_**	Units: **ml/L**		Prep Date: **12/9/2020**		RunNo: **149332**					
Client ID: **PBW**	Batch ID: **83452**	TestNo: **SM2540F**			Analysis Date: **12/9/2020**		SeqNo: **4036822**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Settleable Matter	ND	0.10										

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: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 1664_HEM_W

Sample ID: **MB-83419**	SampType: **MBLK**	TestCode: **1664_HEM_W**	Units: **mg/L**	Prep Date: **12/10/2020**	RunNo: **149304**
Client ID: **PBW**	Batch ID: **83419**	TestNo: **EPA 1664 _HE**		Analysis Date: **12/10/2020**	SeqNo: **4035371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	ND	4.0									

Sample ID: **LCS-83419**	SampType: **LCS**	TestCode: **1664_HEM_W**	Units: **mg/L**	Prep Date: **12/10/2020**	RunNo: **149304**
Client ID: **LCSW**	Batch ID: **83419**	TestNo: **EPA 1664 _HE**		Analysis Date: **12/10/2020**	SeqNo: **4035372**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	39.700	4.0	40.00	0	99.2	78	114				

Sample ID: **LCSD-83419**	SampType: **LCSD**	TestCode: **1664_HEM_W**	Units: **mg/L**	Prep Date: **12/10/2020**	RunNo: **149304**
Client ID: **LCSS02**	Batch ID: **83419**	TestNo: **EPA 1664 _HE**		Analysis Date: **12/10/2020**	SeqNo: **4035373**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	39.600	4.0	40.00	0	99.0	78	114	39.70	0.252	18	

Sample ID: **N043357-001DMS**	SampType: **MS**	TestCode: **1664_HEM_W**	Units: **mg/L**	Prep Date: **12/10/2020**	RunNo: **149304**
Client ID: **ZZZZZZ**	Batch ID: **83419**	TestNo: **EPA 1664 _HE**		Analysis Date: **12/10/2020**	SeqNo: **4035377**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	38.022	4.4	43.96	0.9412	84.4	78	114				

Sample ID: **N043357-001DMSD**	SampType: **MSD**	TestCode: **1664_HEM_W**	Units: **mg/L**	Prep Date: **12/10/2020**	RunNo: **149304**
Client ID: **ZZZZZZ**	Batch ID: **83419**	TestNo: **EPA 1664 _HE**		Analysis Date: **12/10/2020**	SeqNo: **4035378**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	38.315	4.5	44.94	0.9412	83.2	78	114	38.02	0.767	18	

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: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **MB-83376**	SampType: **MBLK**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149314**
Client ID: **PBW**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/9/2020**	SeqNo: **4035822**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50									
Lead	ND	0.50									

Sample ID: **LCS-83376**	SampType: **LCS**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149314**
Client ID: **LCSW**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/9/2020**	SeqNo: **4035823**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.352	0.50	10.00	0	104	85	115				
Lead	9.811	0.50	10.00	0	98.1	85	115				

Sample ID: **N043364-001D-DUP**	SampType: **DUP**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149314**
Client ID: **ZZZZZZ**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/9/2020**	SeqNo: **4035826**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50						0	0	20	
Lead	ND	0.50						0	0	20	

Sample ID: **N043364-001D-MS**	SampType: **MS**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149314**
Client ID: **ZZZZZZ**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/9/2020**	SeqNo: **4035828**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	8.288	0.50	10.00	0	82.9	75	125				
Lead	12.700	0.50	10.00	0	127	75	125				S

Sample ID: **N043364-001D-MSD**	SampType: **MSD**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149314**
Client ID: **ZZZZZZ**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/9/2020**	SeqNo: **4035829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	8.178	0.50	10.00	0	81.8	75	125	8.288	1.34	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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **N043364-001D-MSD**	SampType: **MSD**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149314**
Client ID: **ZZZZZZ**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/9/2020**	SeqNo: **4035829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	12.700	0.50	10.00	0	127	75	125	12.70	0.000118	20	S

Sample ID: **MB-83376**	SampType: **MBLK**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149315**
Client ID: **PBW**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/10/2020**	SeqNo: **4035909**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	1.0									

Sample ID: **LCS-83376**	SampType: **LCS**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149315**
Client ID: **LCSW**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/10/2020**	SeqNo: **4035910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	110.265	1.0	100.0	0	110	85	115				

Sample ID: **N043364-001D-DUP**	SampType: **DUP**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149315**
Client ID: **ZZZZZZ**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/10/2020**	SeqNo: **4035913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	2.154	1.0						2.278	5.58	20	

Sample ID: **N043364-001D-MS**	SampType: **MS**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **12/9/2020**	RunNo: **149315**
Client ID: **ZZZZZZ**	Batch ID: **83376**	TestNo: **EPA 200.8**		Analysis Date: **12/10/2020**	SeqNo: **4035915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	95.968	1.0	100.0	2.278	93.7	75	125				

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: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **N043364-001D-MSD** SampType: **MSD** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **12/9/2020** RunNo: **149315**
Client ID: **ZZZZZZ** Batch ID: **83376** TestNo: **EPA 200.8** Analysis Date: **12/10/2020** SeqNo: **4035916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	101.394	1.0	100.0	2.278	99.1	75	125	95.97	5.50	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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 2130_W

Sample ID: **MB-R149313**	SampType: **MBLK**	TestCode: **2130_W**	Units: **NTU**	Prep Date:	RunNo: **149313**
Client ID: **PBW**	Batch ID: **R149313**	TestNo: **SM 2130B**		Analysis Date: **12/10/2020**	SeqNo: **4035771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	ND	0.10									

Sample ID: **N043364-001HDUP**	SampType: **DUP**	TestCode: **2130_W**	Units: **NTU**	Prep Date:	RunNo: **149313**
Client ID: **ZZZZZZ**	Batch ID: **R149313**	TestNo: **SM 2130B**		Analysis Date: **12/10/2020**	SeqNo: **4035773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	0.280	0.10						0.2900	3.51	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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Sample ID: **MB-83410**	SampType: **MBLK**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **12/10/2020**	RunNo: **149294**
Client ID: **PBW**	Batch ID: **83410**	TestNo: **EPA 245.1**		Analysis Date: **12/10/2020**	SeqNo: **4034109**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.023	0.050									J

Sample ID: **LCS-83410**	SampType: **LCS**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **12/10/2020**	RunNo: **149294**
Client ID: **LCSW**	Batch ID: **83410**	TestNo: **EPA 245.1**		Analysis Date: **12/10/2020**	SeqNo: **4034110**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.480	0.050	2.500	0	99.2	85	115				

Sample ID: **N043364-001D-DUP**	SampType: **DUP**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **12/10/2020**	RunNo: **149294**
Client ID: **ZZZZZZ**	Batch ID: **83410**	TestNo: **EPA 245.1**		Analysis Date: **12/10/2020**	SeqNo: **4034113**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050						0	0	20	

Sample ID: **N043364-001D-MS**	SampType: **MS**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **12/10/2020**	RunNo: **149294**
Client ID: **ZZZZZZ**	Batch ID: **83410**	TestNo: **EPA 245.1**		Analysis Date: **12/10/2020**	SeqNo: **4034115**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.450	0.050	2.500	0	98.0	75	125				

Sample ID: **N043364-001D-MSD**	SampType: **MSD**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **12/10/2020**	RunNo: **149294**
Client ID: **ZZZZZZ**	Batch ID: **83410**	TestNo: **EPA 245.1**		Analysis Date: **12/10/2020**	SeqNo: **4034116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.380	0.050	2.500	0	95.2	75	125	2.450	2.90	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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: **MB-83377**	SampType: **MBLK**	TestCode: **8015_W_FP_**	Units: **ug/L**	Prep Date: **12/9/2020**	RunNo: **149317**	
Client ID: **PBW**	Batch ID: **83377**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **12/10/2020**	SeqNo: **4036141**	

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)	18.788	25									J
Surr: Octacosane	72.291		80.00		90.4	26	152				
Surr: p-Terphenyl	69.860		80.00		87.3	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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: **MB-R149317** SampType: **MBLK** TestCode: **8015_W_SFP** Units: **ug/L** Prep Date: RunNo: **149317**
Client ID: **PBW** Batch ID: **R149317** TestNo: **EPA 8015B** Analysis Date: **12/10/2020** SeqNo: **4037372**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	54.788	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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Sample ID: **E201209LCS** SampType: **LCS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **149266**
Client ID: **LCSW** Batch ID: **E20VW123** TestNo: **EPA 8015B** Analysis Date: **12/9/2020** SeqNo: **4033131**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	925.000	50	1000	0	92.5	67	136				
Surr: Chlorobenzene - d5	44058.000		50000		88.1	74	138				

Sample ID: **E201209MB** SampType: **MBLK** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **149266**
Client ID: **PBW** Batch ID: **E20VW123** TestNo: **EPA 8015B** Analysis Date: **12/9/2020** SeqNo: **4033132**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	36.000	50									J
Surr: Chlorobenzene - d5	48815.000		50000		97.6	74	138				

Sample ID: **N043364-001BMSD** SampType: **MSD** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **149266**
Client ID: **ZZZZZZ** Batch ID: **E20VW123** TestNo: **EPA 8015B** Analysis Date: **12/9/2020** SeqNo: **4033135**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1021.000	50	1000	42.00	97.9	67	136	1002	1.88	30	
Surr: Chlorobenzene - d5	46303.000		50000		92.6	74	138		0	0	

Sample ID: **N043364-001BMS** SampType: **MS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **149266**
Client ID: **ZZZZZZ** Batch ID: **E20VW123** TestNo: **EPA 8015B** Analysis Date: **12/9/2020** SeqNo: **4033137**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1002.000	50	1000	42.00	96.0	67	136				
Surr: Chlorobenzene - d5	52671.000		50000		105	74	138				

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: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **R201209-LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **149271**
Client ID: **LCSW** Batch ID: **R20VW035** TestNo: **EPA 8260B** Analysis Date: **12/9/2020** SeqNo: **4033270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	18.080	0.50	20.00	0	90.4	69	133				
1,2-Dichloroethane	22.600	0.50	20.00	0	113	69	132				
Benzene	18.430	1.0	20.00	0	92.2	81	122				
Ethylbenzene	19.730	1.0	20.00	0	98.6	73	127				
m,p-Xylene	42.140	1.0	40.00	0	105	76	128				
MTBE	17.760	1.0	20.00	0	88.8	65	123				
o-Xylene	20.570	1.0	20.00	0	103	80	121				
Tert-Butanol	115.610	5.0	100.0	0	116	70	130				
Toluene	18.690	2.0	20.00	0	93.5	77	122				
Xylenes, Total	62.710	2.0	60.00	0	105	75	125				
Surr: 1,2-Dichloroethane-d4	28.470		25.00		114	72	119				
Surr: 4-Bromofluorobenzene	27.150		25.00		109	76	119				
Surr: Dibromofluoromethane	24.550		25.00		98.2	85	115				
Surr: Toluene-d8	25.640		25.00		103	81	120				

Sample ID: **N043364-001A-MS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **149271**
Client ID: **ZZZZZZ** Batch ID: **R20VW035** TestNo: **EPA 8260B** Analysis Date: **12/9/2020** SeqNo: **4033271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	17.700	0.50	20.00	0	88.5	69	133				
1,2-Dichloroethane	21.290	0.50	20.00	0	106	69	132				
Benzene	18.590	1.0	20.00	0	93.0	81	122				
Ethylbenzene	20.120	1.0	20.00	0	101	73	127				
m,p-Xylene	42.860	1.0	40.00	0	107	76	128				
MTBE	15.600	1.0	20.00	0	78.0	65	123				
o-Xylene	20.490	1.0	20.00	0	102	80	121				
Tert-Butanol	101.940	5.0	100.0	0	102	70	130				
Toluene	18.480	2.0	20.00	0	92.4	77	122				
Xylenes, Total	63.350	2.0	60.00	0	106	75	125				
Surr: 1,2-Dichloroethane-d4	25.810		25.00		103	72	119				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
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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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **N043364-001A-MS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **149271**
Client ID: **ZZZZZZ** Batch ID: **R20VW035** TestNo: **EPA 8260B** Analysis Date: **12/9/2020** SeqNo: **4033271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	26.370		25.00		105	76	119				
Surr: Dibromofluoromethane	23.360		25.00		93.4	85	115				
Surr: Toluene-d8	25.230		25.00		101	81	120				

Sample ID: **N043364-001A-MSD** SampType: **MSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **149271**
Client ID: **ZZZZZZ** Batch ID: **R20VW035** TestNo: **EPA 8260B** Analysis Date: **12/9/2020** SeqNo: **4033272**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	17.770	0.50	20.00	0	88.8	69	133	17.70	0.395	20	
1,2-Dichloroethane	21.460	0.50	20.00	0	107	69	132	21.29	0.795	20	
Benzene	18.390	1.0	20.00	0	92.0	81	122	18.59	1.08	20	
Ethylbenzene	19.870	1.0	20.00	0	99.4	73	127	20.12	1.25	20	
m,p-Xylene	42.590	1.0	40.00	0	106	76	128	42.86	0.632	20	
MTBE	16.680	1.0	20.00	0	83.4	65	123	15.60	6.69	20	
o-Xylene	20.490	1.0	20.00	0	102	80	121	20.49	0	20	
Tert-Butanol	115.470	5.0	100.0	0	115	70	130	101.9	12.4	20	
Toluene	18.540	2.0	20.00	0	92.7	77	122	18.48	0.324	20	
Xylenes, Total	63.080	2.0	60.00	0	105	75	125	63.35	0.427	20	
Surr: 1,2-Dichloroethane-d4	26.880		25.00		108	72	119		0		
Surr: 4-Bromofluorobenzene	27.460		25.00		110	76	119		0		
Surr: Dibromofluoromethane	24.090		25.00		96.4	85	115		0		
Surr: Toluene-d8	25.610		25.00		102	81	120		0		

Sample ID: **R201209-MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **149271**
Client ID: **PBW** Batch ID: **R20VW035** TestNo: **EPA 8260B** Analysis Date: **12/9/2020** SeqNo: **4033273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
Benzene	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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **R201209-MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **149271**
Client ID: **PBW** Batch ID: **R20VW035** TestNo: **EPA 8260B** Analysis Date: **12/9/2020** SeqNo: **4033273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
MTBE	ND	1.0									
o-Xylene	ND	1.0									
Tert-Butanol	ND	5.0									
Toluene	ND	2.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	27.660		25.00		111	72	119				
Surr: 4-Bromofluorobenzene	23.460		25.00		93.8	76	119				
Surr: Dibromofluoromethane	24.710		25.00		98.8	85	115				
Surr: Toluene-d8	24.800		25.00		99.2	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

CLIENT: CH2MHill
Work Order: N043364
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270WATER_SIMEXT

Sample ID: **LCS-83474** SampType: **LCS** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **12/14/2020** RunNo: **149537**
Client ID: **LCSW** Batch ID: **83474** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/18/2020** SeqNo: **4052293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	2.230	1.0	6.000	0	37.2	24	120				
Surr: Phenol-d5	0.350		1.000		35.0	25	108				

Sample ID: **LCSD-83474** SampType: **LCSD** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **12/14/2020** RunNo: **149537**
Client ID: **LCSS02** Batch ID: **83474** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/18/2020** SeqNo: **4052294**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	2.520	1.0	6.000	0	42.0	24	120	2.230	12.2	20	
Surr: Phenol-d5	0.400		1.000		40.0	25	108		0		

Sample ID: **MB-83474** SampType: **MBLK** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **12/14/2020** RunNo: **149537**
Client ID: **PBW** Batch ID: **83474** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/18/2020** SeqNo: **4052295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	1.0									
Surr: Phenol-d5	0.360		1.000		36.0	25	108				

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

CH2HI03 C: 12/10/202 12:00 AM
FOLDER R: 12/8/2020
N043364-002A 1 of 1

N043364

Asset Laboratories
3151 W. Post Road
Las Vegas, NV 89118
Tel: 702-307-2659 Fax: 702-307-2691
Marion Cartin (marion@assetlaboratories.com)

CHAIN OF CUSTODY RECORD

DATE: 12/8/20
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: Ryan Koch	Report To: Eric Davis	Attention: Court Reece - Ref. AFE# 81195	Sampler Name: James Dye
Address: 1001 Louisiana St., Houston, TX 77002	Copy To: Court Reece	Company Name: Kinder Morgan Energy Partners	Sampler Signature:
Email To: Ryan_Koch@kindermorgan.com eric.davis@jacobs.com; nils.orliczky@jacobs.com	Purchase Order No.:	Address: 1001 Louisiana St., Houston, TX 77002	Sample Date: 12/8/20
Phone 713-420-6730 Fax 714-560-4801	Project Name: SFPP Norwalk	ATL Project Manager: Marion Cartin	

Section E Required Sample Information

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS	Analysis Test	BTEX, 1,1-DCA, 1,2-DCA, MTBE, TBA (8260B)	TPH-gas (C6-C12) (8015B)	TPH-d (C13-C22), TPH-ot (C23+), Total TPH (8015B)	Cu, Pb, Zn (200.8); Hg (245.1)	Phenol (8270)	BOD (@ 20 deg. C)(SM5210B)	Total Suspended Solids (SM2540D); Turbidity (SM2130B)	Oil & Grease (1664)	Ammonia Nitrogen (as N) (SM 4500 NH3-)	Settleable Solids (SM2540F)					Comments
	CONTAINER TYPE								V	V	A	P	A	P	P	G	P	P					4.1°C #1
	# OF CONTAINERS								5	3	2	1	2	1	1	2	1	1					
	PRESERVATIVE								H	H	--	N	--	--	--	S	S	--					
	VOLUME (mL)								40	40	1000	500	1000	1000	1000	1000	500	1000					
1	EFF- 120820	EFFLUENT	WW	G	12/8/20	1145	17		X	X	X	X	X	X	X	X	X	X					N043364-01
2																							Report metals, TPH and VOC preliminary data on 24-hr TAT
3																							Report total Xylenes
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
	12/8/20 1230		12/8/20 1331
	12/8/20 1708	ANDREW GARAND	12/8/20 14:08
	12/8/20 1800	Belkys Hernandez	12/9/20 8:50 am

Turn Around Time (TAT):
- ☐A = Same Day
- ☑B = 24 Hours
- ☐C = 48 Hours
- ☐D = 72 Hours
- ☑E = 5 Workdays
- ☐E = 10 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instructions:
Las Vegas
3°C/4.7°C IR#2
650#870 1/8700

Matrix:			Preservatives:			Container Type:			
W = Water	WW = Wastewater		H = HCl	N = HNO3	S = H2SO4	T = Tube	V = VOA	P = Pint	A = Amber
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	

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:	12/8/2020	Workorder:	N043364
Rep sample Temp (Deg C):	4.1	IR Gun ID:	1
Temp Blank:	☐ Yes ☑ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

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

Comments: Received at Las Vegas Lab on 12/9/20 at 3.4oC/4.7oC, IR # 2, GSO #s 8701/8700.

For:

Checklist Completed By: AG 12/9/2020

Reviewed By: 12/09/2020

ASSET Laboratories

WORK ORDER Summary

09-Dec-20

WorkOrder: N043364

Client ID: CH2HI03

Project: SFPP Norwalk **QC Level:** RTNE **Date Received:** 12/8/2020

Comments: Report metals, TPH and VOC preliminary data on 24 HR TAT

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N043364-001A	EFF-120820	12/8/2020 11:45:00 AM	12/10/2020	Wastewater	EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	V-CA
N043364-001B			12/10/2020		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	☐	☐	☐	VW
N043364-001C			12/10/2020		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	☐	☐	☐	WW
			12/10/2020		EPA 8015B	TPH EXTRACTABLE BY GC/FID	☐	☐	☐	WW
			12/10/2020		EPA 8015B	Total TPH	☐	☐	☐	WW
N043364-001D			12/10/2020			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/10/2020		EPA 200.8	TOTAL METALS BY ICPMS	☐	☐	☐	WW
			12/10/2020		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/10/2020			MERCURY PREP	☐	☐	☐	WW
N043364-001E			12/14/2020		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: 8270C - SIM	☐	☐	☐	WW
			12/14/2020		EPA 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	WW
N043364-001F			12/14/2020		SM 5210 B	BIOCHEMICAL OXYGEN DEMAND	☐	☐	☑	SUB
N043364-001G			12/14/2020		SM2540D	TOTAL NON-FILTERABLE RESIDUE	☐	☐	☐	WW-CA
			12/14/2020			Total Suspended Solids Prep	☐	☐	☐	WW-CA
N043364-001H			12/14/2020		SM 2130B	TURBIDITY	☐	☐	☐	WW
N043364-001I			12/14/2020			Oil and Grease Sample Prep	☐	☐	☐	WW
			12/14/2020		EPA 1664 _HEM Rev B	Hexane Extractable Material (HEM)	☐	☐	☐	WW
N043364-001J			12/14/2020		SM4500-NH3C	AMMONIA-N	☐	☐	☑	SUB
N043364-001K			12/14/2020		SM2540F	SETTLEABLE MATTER	☐	☐	☐	WW-CA
			12/14/2020			Setteable Matter	☐	☐	☐	WW-CA

ASSET Laboratories

WORK ORDER Summary

09-Dec-20

WorkOrder: N043364

Client ID: CH2HI03

Project: SFPP Norwalk **QC Level:** RTNE **Date Received:** 12/8/2020

Comments: Report metals, TPH and VOC preliminary data on 24 HR TAT

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N043364-002A	FOLDER	12/10/2020	12/10/2020		Folder	Folder	☐	☐	☐	LAB
			12/10/2020		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: James Dye

08-Dec-20

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM 5210 B	SM4500-NH3C	
N043364-001F / EFF-120820	Wastewater	12/18/2020 11:45:00 AM	32OZP	1		
N043364-001J / EFF-120820	Wastewater	12/18/2020 11:45:00 AM	16OZP		1	

12/8/2020

YRJ 12/8/2020

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

PO#:N43364A Please email invoices & statements to elvira@assetlaboratories.com. For questions, call Thad Malit at (562)-219-7435. RESULTS NEEDED: 12/15/20. EMAIL RESULTS TO: reports@assetlaboratories.com, sonny.lorenzo@assetlaboratories.com.

Please analyze for Ammonia and BOD. GSO # 5514 68773

	Date/Time		Date/Time
Relinquished by: Anshka Wijesekera	12/8/20 18:00	**Received by:**	
Relinquished by:		**Received by:**	

GLS

800-322-5555
www.gls-us.com

Ship From
ASSET LABORATORIES
THAD MALIT
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Ship To
ASSET LABORATORIES
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

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

Delivery Instructions:
HOLD FOR PICK UP
Signature Type: STANDARD

Tracking #: 551468700

CPS

LAS VEGAS

C89102A

32285631

LVS NV891-A 1

Print Date: 12/8/2020 4:59 PM

Package 1 of 2

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

3.4°C

GLS

800-322-5555
www.gls-us.com

Ship From
ASSET LABORATORIES
THAD MALIT
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Ship To
ASSET LABORATORIES
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

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

Delivery Instructions:
HOLD FOR PICK UP
Signature Type: STANDARD

Tracking #: 551468701

CPS

LAS VEGAS

C89102A

32285632

LVS NV891-A 1

Print Date: 12/8/2020 4:59 PM

Package 2 of 2

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

4.7°C Ice#2
8:50 am

Date of Report: 12/22/2020

Sonny Lorenzo

Asset Laboratories, Inc.-Cerritos
11110 Artesia Blvd., Suite B
Cerritos, CA 90703

Client Project:	N043364
BCL Project:	Cerritos
BCL Work Order:	2035998
Invoice ID:	B401627

Enclosed are the results of analyses for samples received by the laboratory on 12/9/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval
Client Service Rep

Stuart Buttram
Technical Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Table of Contents

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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Chain of Custody and Cooler Receipt Form for 2035998 Page 1 of 3

REVISED

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

QC Level: RTNE

Field Sampler: James Dye

08-Dec-20

Subcontractor:
BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests			
				SM 6210 B	SM4500-NH3C		
N043364-001F / EFF-120820	Wastewater	12/18/2020 11:45:00 AM	32OZP	1			
N043364-001J / EFF-120820	Wastewater	12/18/2020 11:45:00 AM	16OZP		1		

12/8/2020

12/8/2020

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM, ALWAYS CC: sonny.lorenzo@assetlaboratories.com
PO#:N43364 Please email invoices & statements to elvira@assetlaboratories.com. For questions, call Thad Wallt at (562)-219-7435. RESULTS NEEDED: 12/15/20. EMAIL RESULTS TO: reports@assetlaboratories.com, sonny.lorenzo@assetlaboratories.com.
Please analyze for Ammonia and BOD.

GSO # 5514 68773

	Date/Time		Date/Time
Relinquished by:	12/8/20 18:00	Received by:	
Relinquished by:		Received by:	

Chain of Custody and Cooler Receipt Form for 2035998 Page 2 of 3

ASSET Laboratories 20-3598
3151-3153 W Post Rd., Las Vegas, NV 89118
www.all-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

RUSH!

QC Level: RTNE

Field Sampler: James Dye

Subcontractor:
BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

08-Dec-20

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests			
				SM 5210 B	SM4500-NH3C		
N043364-001F / EFF-120820	Wastewater	12/18/2020 11:45:00 AM	32OZP	1			
N043364-001J / EFF-120820	Wastewater	12/18/2020 11:45:00 AM	16OZP		1		

DISTRIBUTION
SUB OUT
SAMPLE HANDLING TIME
Cr+6 NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

GSO # 5514688773

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com
PO#:N43364A Please email invoices & statements to elvira@assetlaboratories.com. For questions, call Thad Malit at (562)-219-7435. RESULTS NEEDED: 12/15/20. EMAIL RESULTS TO: reports@assetlaboratories.com, sonny.lorenzo@assetlaboratories.com.
Please analyze for Ammonia and BOD.

	Date/Time		Date/Time
Relinquished by:	12/8/20 18:00	Received by:	12-9-20 1000
Relinquished by:		Received by:	

Chain of Custody and Cooler Receipt Form for 2035998 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page ___ Of ___

Submission #: 20-35998

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) CLS	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 97 Container: PE Thermometer ID: 274 Date/Time 12-9-20 1005

Temperature: (A) 1.2 °C / (C) 1.0 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS		A								
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMB Date/Time: 12/9/20 1310

A = Actual / C = Corrected

Rev 21 05/23/2016

Asset Laboratories, Inc.-Cerritos
11110 Artesia Blvd., Suite B
Cerritos, CA 90703

Reported: 12/22/2020 12:34
Project: Cerritos
Project Number: N043364
Project Manager: Sonny Lorenzo

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2035998-01	**COC Number:**	---	**Receive Date:**	12/09/2020 10:05
	Project Number:	---	**Sampling Date:**	12/08/2020 11:45
	Sampling Location:	NA	**Sample Depth:**	---
	Sampling Point:	N043364-001F / EFF-120820	**Lab Matrix:**	Water
	Sampled By:	James Dye	**Sample Type:**	Wastewater
2035998-02	**COC Number:**	---	**Receive Date:**	12/09/2020 10:05
	Project Number:	---	**Sampling Date:**	12/08/2020 11:45
	Sampling Location:	NA	**Sample Depth:**	---
	Sampling Point:	N043364-001J / EFF-120820	**Lab Matrix:**	Water
	Sampled By:	James Dye	**Sample Type:**	Wastewater

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Asset Laboratories, Inc.-Cerritos
11110 Artesia Blvd., Suite B
Cerritos, CA 90703

Reported: 12/22/2020 12:34
Project: Cerritos
Project Number: N043364
Project Manager: Sonny Lorenzo

Water Analysis (General Chemistry)

BCL Sample ID: 2035998-01 | **Client Sample Name:** NA, N043364-001F / EFF-120820, 12/8/2020 11:45:00AM, James Dye

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Biochemical Oxygen Demand - Seeded	**2.4**	**mg/L**	**1.5**	**1.5**	**SM17-5210B**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	SM17-5210B	12/10/20 06:45	12/10/20 06:45	JT1	YSIPRO	1.525	B094747	No Prep

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Asset Laboratories, Inc.-Cerritos
11110 Artesia Blvd., Suite B
Cerritos, CA 90703

Reported: 12/22/2020 12:34
Project: Cerritos
Project Number: N043364
Project Manager: Sonny Lorenzo

Water Analysis (General Chemistry)

BCL Sample ID: 2035998-02 | **Client Sample Name:** NA, N043364-001J / EFF-120820, 12/8/2020 11:45:00AM, James Dye

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	**0.13**	**mg/L**	**0.20**	**0.067**	**SM-4500-NH3G**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	SM-4500-NH3G	12/17/20 12:30	12/18/20 16:22	JMH2	SC-1	1.093	B095347	SM 4500-NH3G

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Asset Laboratories, Inc.-Cerritos
11110 Artesia Blvd., Suite B
Cerritos, CA 90703

Reported: 12/22/2020 12:34
Project: Cerritos
Project Number: N043364
Project Manager: Sonny Lorenzo

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B094747						
Biochemical Oxygen Demand - Seeded	B094747-BLK1	ND	mg/L	1.0	1.0	
QC Batch ID: B095347						
Ammonia as N (Distilled)	B095347-BLK1	ND	mg/L	0.20	0.067	

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Asset Laboratories, Inc.-Cerritos
11110 Artesia Blvd., Suite B
Cerritos, CA 90703

Reported: 12/22/2020 12:34
Project: Cerritos
Project Number: N043364
Project Manager: Sonny Lorenzo

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B094747										
Biochemical Oxygen Demand - Seeded	B094747-BS1	LCS	194.82	198.00	mg/L	98.4		85 - 115		
QC Batch ID: B095347										
Ammonia as N (Distilled)	B095347-BS1	LCS	1.9258	2.0000	mg/L	96.3		85 - 115		

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Asset Laboratories, Inc.-Cerritos
11110 Artesia Blvd., Suite B
Cerritos, CA 90703

Reported: 12/22/2020 12:34
Project: Cerritos
Project Number: N043364
Project Manager: Sonny Lorenzo

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B094747	Used client sample: N										
Biochemical Oxygen Demand - Seeded	DUP	2036001-01	136.49	149.45		mg/L	9.1		20		
QC Batch ID: B095347	Used client sample: Y - Description: N043364-001J / EFF-120820, 12/08/2020 11:45										
Ammonia as N (Distilled)	DUP	2035998-02	0.12623	0.11224		mg/L	11.7		20		J
	MS	2035998-02	0.12623	2.5415	2.4291	mg/L		99.4		80 - 120	
	MSD	2035998-02	0.12623	2.4545	2.4291	mg/L	3.5	95.8	20	80 - 120	

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Asset Laboratories, Inc.-Cerritos
11110 Artesia Blvd., Suite B
Cerritos, CA 90703

Reported: 12/22/2020 12:34
Project: Cerritos
Project Number: N043364
Project Manager: Sonny Lorenzo

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit

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SWAMP Field Data Sheet (Water Chemistry & Discrete Probe) - EventType=WQ | Entered in d-base (initial/date) | Pg 1 of 1 Pgs

*StationID: SFPP NORWALK PUMP STATION | *Date (mm/dd/yyyy): 03/13/2020 | *Group: NA | *Agency: Jacobs Engineering

*Funding: | ArrivalTime: 1015 | DepartureTime: 1530 | *SampleTime (1st sample): 1155 | *Protocol:

*ProjectCode: | *Personnel: N. Orliczky / ~~D. Hill~~ N. Harms NO 3-13-20 | *Purpose (circle applicable): WaterChem WaterTox Habitat FieldMeas | *PurposeFailure:

*Location: Bank Thalweg Midchannel OpenWater | *GPS/DGPS | Lat (dd.ddddd) | Long (ddd.ddddd) | OCCUPATION METHOD: Walk-in Bridge R/V _____ Other

GPS Device: Google Earth | Target: | 33.74821 | -118.112072 | STARTING BANK (facing downstream): LB RB NA

Datum: NAD83 | Accuracy (ft / m): 1.59m | *Actual: | 33.747027 | -118.113248 | Point of Sample (if Integrated, then -88 in dbase)

Habitat Observations (CollectionMethod = Habitat_generic)

WADEABILITY: Y / N / Unk | BEAUFORT SCALE (see attachment): 1 | DISTANCE FROM BANK (m): 49 | STREAM WIDTH (m): 109 | WATER DEPTH (m): 14.32ft+

SITE ODOR: None, Sulfides, Sewage, Petroleum, Smoke, Other_____ | HYDROMODIFICATION: None, Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other | LOCATION (to sample): US / DS / WI / NA

SKY CODE: Clear, Partly Cloudy, Overcast, Fog, Smoky, Hazy | WIND DIRECTION (from): W | PHOTOS (RB & LB assigned when facing downstream; RENAME to StationCode_yyyy_mm_dd_uniquecode): 1: (RB / LB / BB / US / DS / ##)

OTHER PRESENCE: Vascular, Nonvascular, OilySheen, Foam, Trash, Other_____ | 2: (RB / LB / BB / US / DS / ##)

DOMINANT SUBSTRATE: Bedrock, Concrete, Cobble, Boulder, Gravel, Sand, Mud, Unk, Other_____

WATERCLARITY: Clear (see bottom), Cloudy (>4" vis), Murky (<4" vis) | PRECIPITATION: None, Fog, Drizzle, Rain, Snow | 3: (RB / LB / BB / US / DS / ##)

WATERODOR: None, Sulfides, Sewage, Petroleum, Mixed, Other_____ | PRECIPITATION (last 24 hrs): Unknown, <1", >1", None

WATERCOLOR: Colorless, Green, Yellow, Brown | EVIDENCE OF FIRES: No, <1 year, <5 years

OVERLAND RUNOFF (Last 24 hrs): none, light, moderate, heavy, unknown

OBSERVED FLOW: NA, Dry Waterbody Bed, No Obs Flow, Isolated Pool, Trickle (<0.1cfs), 0.1-1cfs, 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, >200cfs

Field Measurements (SampleType = FieldMeasure; Method = Field)

	DepthCollec (m)	Velocity (fps)	Air Temp (°C)	Water Temp (°C)	pH	DO (mg/L)	DO (%)	Specific Conductivity (mS/cm)	Salinity (ppt)	Turbidity (ntu)
SUBSURF/MID/ BOTTOM/REP	0.2	0.9	14	16.22	8.76	11.47	114.5	8.07	4.45	61.2
SUBSURF/MID/ BOTTOM/REP										
SUBSURF/MID/ BOTTOM/REP										
Instrument:	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-52	--	Horiba U-52	--	--
Calib. Date:				3-10-20	3-10-20	3-10-20	3-10-20	3-10-20	3-10-20	3-10-20

Samples Taken (# of containers filled) - Method=Water_Grab | Field Dup YES / NO: (SampleType = Grab / Integrated; LABEL_ID = FieldQA; create collection record upon data entry

SAMPLE TYPE: Grab / Integrated | COLLECTION DEVICE: Indiv bottle (by hand, by pole, by bucket); Teflon tubing; Kemmer; Pole & Beaker; Other _____

	DepthCollec (m)	Inorganics	Bacteria	Chl a	TSS / SSC	TOC / DOC	Total Hg	Dissolved Mercury	Total Metals	Dissolved Metals	Organics	Toxicity	VOAs
Sub/Surface	0.2	3			2				1		2		
Sub/Surface													

COMMENTS: NO 3-13-20

~~Tide appears to be coming in, surface water flowing in from ocean. Secchi disc not visible at 1.5 feet below water level.~~

Secchi Disc visibility = 1.2ft+ DTW = 14.32' TD = 20.8' water thickness 6.5ft+

Modified 02/10/1

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-262952-1
Client Project/Site: KMEP/SFPP Norwalk Site

For:
CH2M Hill, Inc.
6 Hutton Centre Drive, Suite 700
Santa Ana, California 92707

Attn: Eric Davis

Authorized for release by:
3/27/2020 1:59:39 PM

Janice Hsu, Project Manager I
(949)260-3263
janice.hsu@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Sample Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262952-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-262952-1	SG1-031320-DW	Water	03/13/20 11:55	03/13/20 17:11	
440-262952-2	SG1-031320-DD	Water	03/13/20 11:55	03/13/20 17:11	
440-262952-3	SG1-031320-EB	Water	03/13/20 11:45	03/13/20 17:11	
440-262952-4	SG1-031320	Water	03/13/20 11:45	03/13/20 17:11	

Job ID: 440-262952-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative
440-262952-1

Comments
No additional comments.

Receipt
The samples were received on 3/13/2020 5:11 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 4.2º C and 5.0º C.

GC/MS Semi VOA
Method 8270C SIM CON: The continuing calibration verification (CCV) associated with batch 570-58315 recovered above the upper control limit for DCB Decachlorobiphenyl. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 570-58315/3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 200.8: The following samples were diluted due to the nature of the sample matrix: SG1-031320-DW (440-262952-1), SG1-031320-DD (440-262952-2) and SG1-031320 (440-262952-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-57829.LCS/LCSD was performed to meet QC requirement.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262952-1

Client Sample ID: SG1-031320-DW

Date Collected: 03/13/20 11:55
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262952-1

Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0038	0.00049	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-18	ND		0.0019	0.00044	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-28	ND		0.0019	0.00050	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-44	ND		0.0019	0.00068	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-52	ND		0.0019	0.00053	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-66	ND		0.0019	0.00038	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-101	ND		0.0019	0.00047	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-105	ND		0.0019	0.00044	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-118	ND		0.0019	0.00048	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-128	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-132/153	ND		0.0038	0.00066	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-138/158	ND		0.0038	0.00057	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-170	ND		0.0019	0.00040	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-180	ND		0.0019	0.00057	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-187	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-195	ND		0.0019	0.00071	ug/L		03/18/20 06:55	03/19/20 16:26	1
PCB-206	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 16:26	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		03/18/20 06:55	03/19/20 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*75*		*50 - 150*	*03/18/20 06:55*	*03/19/20 16:26*	*1*
p-Terphenyl-d14 (Surr)	*83*		*50 - 150*	*03/18/20 06:55*	*03/19/20 16:26*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**0.011**	**J**	0.19	0.010	ug/L		03/17/20 14:08	03/18/20 21:06	1
2-Methylnaphthalene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:06	1
Acenaphthene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:06	1
Acenaphthylene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 21:06	1
Anthracene	ND		0.19	0.014	ug/L		03/17/20 14:08	03/18/20 21:06	1
Benzo[g,h,i]perylene	ND		0.19	0.020	ug/L		03/17/20 14:08	03/18/20 21:06	1
Benzo[k]fluoranthene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 21:06	1
Benzo[a]anthracene	ND		0.19	0.012	ug/L		03/17/20 14:08	03/18/20 21:06	1
Benzo[a]pyrene	ND		0.19	0.018	ug/L		03/17/20 14:08	03/18/20 21:06	1
Benzo[b]fluoranthene	ND		0.19	0.021	ug/L		03/17/20 14:08	03/18/20 21:06	1
Chrysene	ND		0.19	0.022	ug/L		03/17/20 14:08	03/18/20 21:06	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		03/17/20 14:08	03/18/20 21:06	1
Fluoranthene	ND		0.19	0.014	ug/L		03/17/20 14:08	03/18/20 21:06	1
Fluorene	ND		0.19	0.012	ug/L		03/17/20 14:08	03/18/20 21:06	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.021	ug/L		03/17/20 14:08	03/18/20 21:06	1
Naphthalene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:06	1
Phenanthrene	**0.012**	**J**	0.19	0.0049	ug/L		03/17/20 14:08	03/18/20 21:06	1
Pyrene	ND		0.19	0.012	ug/L		03/17/20 14:08	03/18/20 21:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*108*		*33 - 144*	*03/17/20 14:08*	*03/18/20 21:06*	*1*
Nitrobenzene-d5 (Surr)	*93*		*28 - 139*	*03/17/20 14:08*	*03/18/20 21:06*	*1*
p-Terphenyl-d14 (Surr)	*98*		*23 - 160*	*03/17/20 14:08*	*03/18/20 21:06*	*1*

Client Sample ID: SG1-031320-DW

Lab Sample ID: 440-262952-1

Date Collected: 03/13/20 11:55
Matrix: Water
Date Received: 03/13/20 17:11

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.094	0.019	ug/L		03/16/20 06:00	03/16/20 21:57	1
4,4'-DDT	ND		0.0094	0.0038	ug/L		03/16/20 06:00	03/16/20 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*61*		*28 - 108*	*03/16/20 06:00*	*03/16/20 21:57*	*1*
Tetrachloro-m-xylene	*41*		*10 - 123*	*03/16/20 06:00*	*03/16/20 21:57*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	**5.4**		2.5	2.5	ug/L		03/16/20 12:54	03/16/20 22:47	5
Lead	ND		2.5	2.5	ug/L		03/16/20 12:54	03/16/20 22:47	5
Zinc	**35**		13	13	ug/L		03/16/20 12:54	03/16/20 22:47	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**18**		2.0	1.0	mg/L			03/19/20 16:45	1

Client Sample ID: SG1-031320-DD

Lab Sample ID: 440-262952-2

Date Collected: 03/13/20 11:55
Matrix: Water
Date Received: 03/13/20 17:11

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0038	0.00049	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-18	ND		0.0019	0.00044	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-28	ND		0.0019	0.00050	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-44	ND		0.0019	0.00068	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-52	ND		0.0019	0.00053	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-66	ND		0.0019	0.00038	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-101	ND		0.0019	0.00047	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-105	ND		0.0019	0.00044	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-118	ND		0.0019	0.00047	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-128	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-132/153	ND		0.0038	0.00066	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-138/158	ND		0.0038	0.00057	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-170	ND		0.0019	0.00040	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-180	ND		0.0019	0.00057	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-187	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-195	ND		0.0019	0.00071	ug/L		03/18/20 06:55	03/19/20 17:14	1
PCB-206	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 17:14	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		03/18/20 06:55	03/19/20 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*79*		*50 - 150*	*03/18/20 06:55*	*03/19/20 17:14*	*1*
p-Terphenyl-d14 (Surr)	*85*		*50 - 150*	*03/18/20 06:55*	*03/19/20 17:14*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 21:25	1
2-Methylnaphthalene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:25	1
Acenaphthene	**0.014**	**J**	0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:25	1

Client Sample ID: SG1-031320-DD
Lab Sample ID: 440-262952-2
Date Collected: 03/13/20 11:55
Matrix: Water
Date Received: 03/13/20 17:11

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 21:25	1
Anthracene	ND		0.19	0.014	ug/L		03/17/20 14:08	03/18/20 21:25	1
Benzo[g,h,i]perylene	ND		0.19	0.020	ug/L		03/17/20 14:08	03/18/20 21:25	1
Benzo[k]fluoranthene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 21:25	1
Benzo[a]anthracene	ND		0.19	0.012	ug/L		03/17/20 14:08	03/18/20 21:25	1
Benzo[a]pyrene	ND		0.19	0.018	ug/L		03/17/20 14:08	03/18/20 21:25	1
Benzo[b]fluoranthene	ND		0.19	0.021	ug/L		03/17/20 14:08	03/18/20 21:25	1
Chrysene	ND		0.19	0.022	ug/L		03/17/20 14:08	03/18/20 21:25	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		03/17/20 14:08	03/18/20 21:25	1
Fluoranthene	ND		0.19	0.014	ug/L		03/17/20 14:08	03/18/20 21:25	1
Fluorene	**0.018**	**J**	0.19	0.012	ug/L		03/17/20 14:08	03/18/20 21:25	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.021	ug/L		03/17/20 14:08	03/18/20 21:25	1
Naphthalene	**0.023**	**J**	0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:25	1
Phenanthrene	**0.012**	**J**	0.19	0.0048	ug/L		03/17/20 14:08	03/18/20 21:25	1
Pyrene	**0.015**	**J**	0.19	0.012	ug/L		03/17/20 14:08	03/18/20 21:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*101*		*33 - 144*	*03/17/20 14:08*	*03/18/20 21:25*	*1*
Nitrobenzene-d5 (Surr)	*88*		*28 - 139*	*03/17/20 14:08*	*03/18/20 21:25*	*1*
p-Terphenyl-d14 (Surr)	*91*		*23 - 160*	*03/17/20 14:08*	*03/18/20 21:25*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.095	0.019	ug/L		03/16/20 06:00	03/16/20 22:49	1
4,4'-DDT	ND		0.0095	0.0038	ug/L		03/16/20 06:00	03/16/20 22:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*60*		*28 - 108*	*03/16/20 06:00*	*03/16/20 22:49*	*1*
Tetrachloro-m-xylene	*45*		*10 - 123*	*03/16/20 06:00*	*03/16/20 22:49*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	**6.1**		2.5	2.5	ug/L		03/16/20 12:54	03/16/20 22:50	5
Lead	ND		2.5	2.5	ug/L		03/16/20 12:54	03/16/20 22:50	5
Zinc	**39**		13	13	ug/L		03/16/20 12:54	03/16/20 22:50	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**17**		2.0	1.0	mg/L			03/19/20 16:45	1

Client Sample ID: SG1-031320-EB
Lab Sample ID: 440-262952-3
Date Collected: 03/13/20 11:45
Matrix: Water
Date Received: 03/13/20 17:11

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0038	0.00049	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-18	ND		0.0019	0.00044	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-28	ND		0.0019	0.00050	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-44	ND		0.0019	0.00068	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-52	ND		0.0019	0.00053	ug/L		03/18/20 06:55	03/19/20 17:38	1

Client Sample ID: SG1-031320-EB

Date Collected: 03/13/20 11:45
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262952-3

Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-66	ND		0.0019	0.00038	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-101	ND		0.0019	0.00047	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-105	ND		0.0019	0.00044	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-118	ND		0.0019	0.00047	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-128	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-132/153	ND		0.0038	0.00066	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-138/158	ND		0.0038	0.00057	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-170	ND		0.0019	0.00040	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-180	ND		0.0019	0.00057	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-187	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-195	ND		0.0019	0.00071	ug/L		03/18/20 06:55	03/19/20 17:38	1
PCB-206	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 17:38	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		03/18/20 06:55	03/19/20 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*89*		*50 - 150*	*03/18/20 06:55*	*03/19/20 17:38*	*1*
p-Terphenyl-d14 (Surr)	*103*		*50 - 150*	*03/18/20 06:55*	*03/19/20 17:38*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 21:45	1
2-Methylnaphthalene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:45	1
Acenaphthene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:45	1
Acenaphthylene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 21:45	1
Anthracene	ND		0.19	0.014	ug/L		03/17/20 14:08	03/18/20 21:45	1
Benzo[g,h,i]perylene	ND		0.19	0.021	ug/L		03/17/20 14:08	03/18/20 21:45	1
Benzo[k]fluoranthene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 21:45	1
Benzo[a]anthracene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:45	1
Benzo[a]pyrene	ND		0.19	0.018	ug/L		03/17/20 14:08	03/18/20 21:45	1
Benzo[b]fluoranthene	ND		0.19	0.022	ug/L		03/17/20 14:08	03/18/20 21:45	1
Chrysene	ND		0.19	0.022	ug/L		03/17/20 14:08	03/18/20 21:45	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		03/17/20 14:08	03/18/20 21:45	1
Fluoranthene	ND		0.19	0.014	ug/L		03/17/20 14:08	03/18/20 21:45	1
Fluorene	ND		0.19	0.012	ug/L		03/17/20 14:08	03/18/20 21:45	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.021	ug/L		03/17/20 14:08	03/18/20 21:45	1
Naphthalene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 21:45	1
Phenanthrene	ND		0.19	0.0049	ug/L		03/17/20 14:08	03/18/20 21:45	1
Pyrene	ND		0.19	0.012	ug/L		03/17/20 14:08	03/18/20 21:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*70*		*33 - 144*	*03/17/20 14:08*	*03/18/20 21:45*	*1*
Nitrobenzene-d5 (Surr)	*55*		*28 - 139*	*03/17/20 14:08*	*03/18/20 21:45*	*1*
p-Terphenyl-d14 (Surr)	*63*		*23 - 160*	*03/17/20 14:08*	*03/18/20 21:45*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.096	0.019	ug/L		03/16/20 06:00	03/16/20 18:28	1
4,4'-DDT	ND		0.0096	0.0038	ug/L		03/16/20 06:00	03/16/20 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*75*		*28 - 108*	*03/16/20 06:00*	*03/16/20 18:28*	*1*

Client Sample ID: SG1-031320-EB

Lab Sample ID: 440-262952-3

Date Collected: 03/13/20 11:45

Matrix: Water

Date Received: 03/13/20 17:11

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 123*	*03/16/20 06:00*	*03/16/20 18:28*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	**0.60**		0.50	0.50	ug/L		03/16/20 12:54	03/16/20 22:35	1
Lead	ND		0.50	0.50	ug/L		03/16/20 12:54	03/16/20 22:35	1
Zinc	**6.9**		2.5	2.5	ug/L		03/16/20 12:54	03/16/20 22:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			03/19/20 16:45	1

Client Sample ID: SG1-031320

Lab Sample ID: 440-262952-4

Date Collected: 03/13/20 11:45

Matrix: Water

Date Received: 03/13/20 17:11

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0038	0.00049	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-18	ND		0.0019	0.00044	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-28	ND		0.0019	0.00050	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-44	ND		0.0019	0.00068	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-52	ND		0.0019	0.00053	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-66	ND		0.0019	0.00038	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-101	ND		0.0019	0.00048	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-105	ND		0.0019	0.00045	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-118	ND		0.0019	0.00048	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-128	ND		0.0019	0.00042	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-132/153	ND		0.0038	0.00066	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-138/158	ND		0.0038	0.00057	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-170	ND		0.0019	0.00040	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-180	ND		0.0019	0.00058	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-187	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-195	ND		0.0019	0.00072	ug/L		03/18/20 06:55	03/19/20 18:02	1
PCB-206	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 18:02	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		03/18/20 06:55	03/19/20 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*50 - 150*	*03/18/20 06:55*	*03/19/20 18:02*	*1*
p-Terphenyl-d14 (Surr)	*94*		*50 - 150*	*03/18/20 06:55*	*03/19/20 18:02*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 20:07	1
2-Methylnaphthalene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 20:07	1
Acenaphthene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 20:07	1
Acenaphthylene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 20:07	1
Anthracene	ND		0.19	0.014	ug/L		03/17/20 14:08	03/18/20 20:07	1
Benzo[g,h,i]perylene	ND		0.19	0.020	ug/L		03/17/20 14:08	03/18/20 20:07	1
Benzo[k]fluoranthene	ND		0.19	0.010	ug/L		03/17/20 14:08	03/18/20 20:07	1

Client Sample ID: SG1-031320
Date Collected: 03/13/20 11:45
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262952-4
Matrix: Water

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.19	0.013	ug/L		03/17/20 14:08	03/18/20 20:07	1
Benzo[a]pyrene	ND		0.19	0.018	ug/L		03/17/20 14:08	03/18/20 20:07	1
Benzo[b]fluoranthene	ND		0.19	0.022	ug/L		03/17/20 14:08	03/18/20 20:07	1
Chrysene	ND		0.19	0.022	ug/L		03/17/20 14:08	03/18/20 20:07	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		03/17/20 14:08	03/18/20 20:07	1
Fluoranthene	**0.014**	**J**	0.19	0.014	ug/L		03/17/20 14:08	03/18/20 20:07	1
Fluorene	ND		0.19	0.012	ug/L		03/17/20 14:08	03/18/20 20:07	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.021	ug/L		03/17/20 14:08	03/18/20 20:07	1
Naphthalene	**0.015**	**J**	0.19	0.013	ug/L		03/17/20 14:08	03/18/20 20:07	1
Phenanthrene	**0.014**	**J**	0.19	0.0049	ug/L		03/17/20 14:08	03/18/20 20:07	1
Pyrene	**0.015**	**J**	0.19	0.012	ug/L		03/17/20 14:08	03/18/20 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*94*		*33 - 144*	*03/17/20 14:08*	*03/18/20 20:07*	*1*
Nitrobenzene-d5 (Surr)	*78*		*28 - 139*	*03/17/20 14:08*	*03/18/20 20:07*	*1*
p-Terphenyl-d14 (Surr)	*90*		*23 - 160*	*03/17/20 14:08*	*03/18/20 20:07*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.096	0.019	ug/L		03/16/20 06:00	03/16/20 21:04	1
4,4'-DDT	ND		0.0096	0.0038	ug/L		03/16/20 06:00	03/16/20 21:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*66*		*28 - 108*	*03/16/20 06:00*	*03/16/20 21:04*	*1*
Tetrachloro-m-xylene	*47*		*10 - 123*	*03/16/20 06:00*	*03/16/20 21:04*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	**5.3**		2.5	2.5	ug/L		03/16/20 12:54	03/16/20 22:38	5
Lead	ND		2.5	2.5	ug/L		03/16/20 12:54	03/16/20 22:38	5
Zinc	**34**		13	13	ug/L		03/16/20 12:54	03/16/20 22:38	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**26**		2.0	1.0	mg/L			03/19/20 16:45	1

Method Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262952-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs (GC/MS SIM)	SW846	ECL 1
8270C SIM CON	PCB Congeners (GC/MS)	SW846	ECL 1
8081A	Organochlorine Pesticides (GC)	SW846	TAL IRV
200.8	Metals (ICP/MS)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ECL 1
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: CH2M Hill, Inc.
Job ID: 440-262952-1
Project/Site: KMEP/SFPP Norwalk Site

Client Sample ID: SG1-031320-DW
Lab Sample ID: 440-262952-1
Date Collected: 03/13/20 11:55
Matrix: Water
Date Received: 03/13/20 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1051.4 mL	2 mL	57829	03/17/20 14:08	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM		1			58000	03/18/20 21:06	AJ2Q	ECL 1
Total/NA	Prep	3510C			1049.9 mL	1 mL	57938	03/18/20 06:55	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM CON		1			58315	03/19/20 16:26	AJ2Q	ECL 1
Total/NA	Prep	3510C			1060 mL	2 mL	600622	03/16/20 06:00	L1H	TAL IRV
Total/NA	Analysis	8081A		1			600738	03/16/20 21:57	D1D	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600732	03/16/20 12:54	EP	TAL IRV
Total Recoverable	Analysis	200.8		5			600881	03/16/20 22:47	B1H	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	601515	03/19/20 16:45	KL	TAL IRV

Client Sample ID: SG1-031320-DD
Lab Sample ID: 440-262952-2
Date Collected: 03/13/20 11:55
Matrix: Water
Date Received: 03/13/20 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1051.7 mL	2 mL	57829	03/17/20 14:08	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM		1			58000	03/18/20 21:25	AJ2Q	ECL 1
Total/NA	Prep	3510C			1052.4 mL	1 mL	57938	03/18/20 06:55	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM CON		1			58315	03/19/20 17:14	AJ2Q	ECL 1
Total/NA	Prep	3510C			1050 mL	2 mL	600622	03/16/20 06:00	L1H	TAL IRV
Total/NA	Analysis	8081A		1			600738	03/16/20 22:49	D1D	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600732	03/16/20 12:54	EP	TAL IRV
Total Recoverable	Analysis	200.8		5			600881	03/16/20 22:50	B1H	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	601515	03/19/20 16:45	KL	TAL IRV

Client Sample ID: SG1-031320-EB
Lab Sample ID: 440-262952-3
Date Collected: 03/13/20 11:45
Matrix: Water
Date Received: 03/13/20 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1038.5 mL	2 mL	57829	03/17/20 14:08	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM		1			58000	03/18/20 21:45	AJ2Q	ECL 1
Total/NA	Prep	3510C			1052.1 mL	1 mL	57938	03/18/20 06:55	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM CON		1			58315	03/19/20 17:38	AJ2Q	ECL 1
Total/NA	Prep	3510C			1045 mL	2 mL	600622	03/16/20 06:00	L1H	TAL IRV
Total/NA	Analysis	8081A		1			600738	03/16/20 18:28	D1D	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600732	03/16/20 12:54	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600881	03/16/20 22:35	B1H	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	601515	03/19/20 16:45	KL	TAL IRV

Lab Chronicle

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262952-1

Client Sample ID: SG1-031320
Date Collected: 03/13/20 11:45
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262952-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1044.3 mL	2 mL	57829	03/17/20 14:08	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM		1			58000	03/18/20 20:07	AJ2Q	ECL 1
Total/NA	Prep	3510C			1043.8 mL	1 mL	57938	03/18/20 06:55	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM CON		1			58315	03/19/20 18:02	AJ2Q	ECL 1
Total/NA	Prep	3510C			1045 mL	2 mL	600622	03/16/20 06:00	L1H	TAL IRV
Total/NA	Analysis	8081A		1			600738	03/16/20 21:04	D1D	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600732	03/16/20 12:54	EP	TAL IRV
Total Recoverable	Analysis	200.8		5			600881	03/16/20 22:38	B1H	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	601515	03/19/20 16:45	KL	TAL IRV

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Method: 8270C SIM - PAHs (GC/MS SIM)

Lab Sample ID: MB 570-57829/1-A
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57829

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.011	ug/L		03/17/20 14:08	03/18/20 17:31	1
2-Methylnaphthalene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 17:31	1
Acenaphthene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 17:31	1
Acenaphthylene	ND		0.20	0.011	ug/L		03/17/20 14:08	03/18/20 17:31	1
Anthracene	ND		0.20	0.015	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[g,h,i]perylene	ND		0.20	0.021	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[k]fluoranthene	ND		0.20	0.011	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[a]anthracene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[a]pyrene	ND		0.20	0.019	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[b]fluoranthene	ND		0.20	0.023	ug/L		03/17/20 14:08	03/18/20 17:31	1
Chrysene	ND		0.20	0.023	ug/L		03/17/20 14:08	03/18/20 17:31	1
Dibenz(a,h)anthracene	ND		0.20	0.018	ug/L		03/17/20 14:08	03/18/20 17:31	1
Fluoranthene	ND		0.20	0.015	ug/L		03/17/20 14:08	03/18/20 17:31	1
Fluorene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 17:31	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.022	ug/L		03/17/20 14:08	03/18/20 17:31	1
Naphthalene	ND		0.20	0.014	ug/L		03/17/20 14:08	03/18/20 17:31	1
Phenanthrene	ND		0.20	0.0051	ug/L		03/17/20 14:08	03/18/20 17:31	1
Pyrene	ND		0.20	0.012	ug/L		03/17/20 14:08	03/18/20 17:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*120*		*33 - 144*	*03/17/20 14:08*	*03/18/20 17:31*	*1*
Nitrobenzene-d5 (Surr)	*97*		*28 - 139*	*03/17/20 14:08*	*03/18/20 17:31*	*1*
p-Terphenyl-d14 (Surr)	*106*		*23 - 160*	*03/17/20 14:08*	*03/18/20 17:31*	*1*

Lab Sample ID: LCS 570-57829/2-A
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57829

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	2.00	2.33		ug/L		116	20 - 140
2-Methylnaphthalene	2.00	2.13		ug/L		106	21 - 140
Acenaphthene	2.00	2.15		ug/L		107	55 - 121
Acenaphthylene	2.00	2.38		ug/L		119	33 - 145
Anthracene	2.00	2.16		ug/L		108	27 - 133
Benzo[g,h,i]perylene	2.00	2.38		ug/L		119	25 - 157
Benzo[k]fluoranthene	2.00	2.44		ug/L		122	24 - 159
Benzo[a]anthracene	2.00	2.14		ug/L		107	33 - 143
Benzo[a]pyrene	2.00	2.13		ug/L		106	17 - 163
Benzo[b]fluoranthene	2.00	2.32		ug/L		116	24 - 159
Chrysene	2.00	2.07		ug/L		103	17 - 168
Dibenz(a,h)anthracene	2.00	2.29		ug/L		115	25 - 175
Fluoranthene	2.00	2.28		ug/L		114	26 - 137
Fluorene	2.00	2.34		ug/L		117	59 - 121
Indeno[1,2,3-cd]pyrene	2.00	2.29		ug/L		114	25 - 175
Naphthalene	2.00	2.08		ug/L		104	21 - 133
Phenanthrene	2.00	2.13		ug/L		106	54 - 120
Pyrene	2.00	2.10		ug/L		105	45 - 129

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: LCS 570-57829/2-A
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57829

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	112		33 - 144
Nitrobenzene-d5 (Surr)	101		28 - 139
p-Terphenyl-d14 (Surr)	99		23 - 160

Lab Sample ID: LCSD 570-57829/3-A
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57829

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene			2.00	2.30		ug/L		115	20 - 140	1	25
2-Methylnaphthalene			2.00	2.15		ug/L		107	21 - 140	1	25
Acenaphthene			2.00	2.15		ug/L		107	55 - 121	0	25
Acenaphthylene			2.00	2.17		ug/L		109	33 - 145	9	25
Anthracene			2.00	2.12		ug/L		106	27 - 133	2	25
Benzo[g,h,i]perylene			2.00	2.31		ug/L		115	25 - 157	3	25
Benzo[k]fluoranthene			2.00	2.35		ug/L		118	24 - 159	4	25
Benzo[a]anthracene			2.00	2.15		ug/L		107	33 - 143	0	25
Benzo[a]pyrene			2.00	2.03		ug/L		101	17 - 163	5	25
Benzo[b]fluoranthene			2.00	2.18		ug/L		109	24 - 159	7	25
Chrysene			2.00	2.06		ug/L		103	17 - 168	0	25
Dibenz(a,h)anthracene			2.00	2.28		ug/L		114	25 - 175	0	25
Fluoranthene			2.00	2.11		ug/L		105	26 - 137	8	25
Fluorene			2.00	2.28		ug/L		114	59 - 121	2	25
Indeno[1,2,3-cd]pyrene			2.00	2.23		ug/L		112	25 - 175	2	25
Naphthalene			2.00	2.16		ug/L		108	21 - 133	4	25
Phenanthrene			2.00	2.18		ug/L		109	54 - 120	3	25
Pyrene			2.00	2.11		ug/L		105	45 - 129	0	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	107		33 - 144
Nitrobenzene-d5 (Surr)	109		28 - 139
p-Terphenyl-d14 (Surr)	97		23 - 160

Lab Sample ID: 440-262952-4 MS
Matrix: Water
Analysis Batch: 58000

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57829

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	ND		2.00	1.46		ug/L		73	20 - 140
2-Methylnaphthalene	ND		2.00	1.39		ug/L		69	21 - 140
Acenaphthene	ND		2.00	1.45		ug/L		72	49 - 121
Acenaphthylene	ND		2.00	1.55		ug/L		78	33 - 145
Anthracene	ND		2.00	1.91		ug/L		96	27 - 133
Benzo[g,h,i]perylene	ND		2.00	2.33		ug/L		117	10 - 227
Benzo[k]fluoranthene	ND		2.00	2.13		ug/L		106	24 - 159
Benzo[a]anthracene	ND		2.00	2.05		ug/L		102	33 - 143
Benzo[a]pyrene	ND		2.00	1.98		ug/L		99	17 - 163
Benzo[b]fluoranthene	ND		2.00	2.23		ug/L		111	24 - 159

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: 440-262952-4 MS
Matrix: Water
Analysis Batch: 58000

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57829

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	ND		2.00	1.97		ug/L		98	17 - 168
Dibenz(a,h)anthracene	ND		2.00	2.36		ug/L		118	10 - 219
Fluoranthene	0.014	J	2.00	2.18		ug/L		108	26 - 137
Fluorene	ND		2.00	1.70		ug/L		85	59 - 121
Indeno[1,2,3-cd]pyrene	ND		2.00	2.25		ug/L		113	10 - 171
Naphthalene	0.015	J	2.00	1.30		ug/L		64	21 - 133
Phenanthrene	0.014	J	2.00	1.79		ug/L		89	54 - 120
Pyrene	0.015	J	2.00	1.86		ug/L		92	18 - 168

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*71*		*33 - 144*
Nitrobenzene-d5 (Surr)	*58*		*28 - 139*
p-Terphenyl-d14 (Surr)	*84*		*23 - 160*

Lab Sample ID: 440-262952-4 MSD
Matrix: Water
Analysis Batch: 58000

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57829

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	ND		2.00	1.39		ug/L		70	20 - 140	5	25
2-Methylnaphthalene	ND		2.00	1.33		ug/L		66	21 - 140	5	25
Acenaphthene	ND		2.00	1.39		ug/L		70	49 - 121	4	25
Acenaphthylene	ND		2.00	1.54		ug/L		77	33 - 145	1	25
Anthracene	ND		2.00	1.79		ug/L		90	27 - 133	6	25
Benzo[g,h,i]perylene	ND		2.00	1.93		ug/L		96	10 - 227	19	25
Benzo[k]fluoranthene	ND		2.00	1.96		ug/L		98	24 - 159	8	25
Benzo[a]anthracene	ND		2.00	1.83		ug/L		91	33 - 143	11	25
Benzo[a]pyrene	ND		2.00	1.84		ug/L		92	17 - 163	8	25
Benzo[b]fluoranthene	ND		2.00	2.01		ug/L		101	24 - 159	10	25
Chrysene	ND		2.00	1.73		ug/L		87	17 - 168	13	25
Dibenz(a,h)anthracene	ND		2.00	1.98		ug/L		99	10 - 219	18	25
Fluoranthene	0.014	J	2.00	1.96		ug/L		97	26 - 137	11	25
Fluorene	ND		2.00	1.65		ug/L		83	59 - 121	3	25
Indeno[1,2,3-cd]pyrene	ND		2.00	1.91		ug/L		96	10 - 171	16	25
Naphthalene	0.015	J	2.00	1.22		ug/L		60	21 - 133	6	25
Phenanthrene	0.014	J	2.00	1.66		ug/L		82	54 - 120	8	25
Pyrene	0.015	J	2.00	1.72		ug/L		85	18 - 168	8	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*70*		*33 - 144*
Nitrobenzene-d5 (Surr)	*55*		*28 - 139*
p-Terphenyl-d14 (Surr)	*77*		*23 - 160*

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Lab Sample ID: MB 570-57938/1-A
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57938

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0040	0.00051	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-18	ND		0.0020	0.00046	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-28	ND		0.0020	0.00053	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-44	ND		0.0020	0.00071	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-52	ND		0.0020	0.00056	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-66	ND		0.0020	0.00040	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-101	ND		0.0020	0.00050	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-105	ND		0.0020	0.00047	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-118	ND		0.0020	0.00050	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-128	ND		0.0020	0.00043	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-132/153	ND		0.0040	0.00069	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-138/158	ND		0.0040	0.00060	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-170	ND		0.0020	0.00042	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-180	ND		0.0020	0.00060	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-187	ND		0.0020	0.00043	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-195	ND		0.0020	0.00075	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-206	ND		0.0020	0.00043	ug/L		03/18/20 06:55	03/19/20 12:23	1
Decachlorobiphenyl	ND		0.0020	0.0013	ug/L		03/18/20 06:55	03/19/20 12:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*50 - 150*	*03/18/20 06:55*	*03/19/20 12:23*	*1*
p-Terphenyl-d14 (Surr)	*103*		*50 - 150*	*03/18/20 06:55*	*03/19/20 12:23*	*1*

Lab Sample ID: LCS 570-57938/2-A
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57938

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-5/8	0.500	0.414		ug/L		83	50 - 150
PCB-18	0.500	0.335		ug/L		67	50 - 150
PCB-28	0.500	0.385		ug/L		77	50 - 150
PCB-44	0.500	0.399		ug/L		80	50 - 150
PCB-52	0.500	0.406		ug/L		81	50 - 150
PCB-66	0.500	0.427		ug/L		85	50 - 150
PCB-101	0.500	0.419		ug/L		84	50 - 150
PCB-105	0.500	0.385		ug/L		77	50 - 150
PCB-118	0.500	0.372		ug/L		74	50 - 150
PCB-128	0.500	0.432		ug/L		86	50 - 150
PCB-132/153	0.500	0.509		ug/L		102	50 - 150
PCB-138/158	0.500	0.354		ug/L		71	50 - 150
PCB-170	0.500	0.395		ug/L		79	50 - 150
PCB-180	0.500	0.446		ug/L		89	50 - 150
PCB-187	0.500	0.441		ug/L		88	50 - 150
PCB-195	0.500	0.425		ug/L		85	50 - 150
PCB-206	0.500	0.463		ug/L		93	50 - 150
Decachlorobiphenyl	0.500	0.494		ug/L		99	50 - 150

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: LCS 570-57938/2-A
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57938

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	80		50 - 150
p-Terphenyl-d14 (Surr)	95		50 - 150

Lab Sample ID: LCSD 570-57938/3-A
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57938

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8			0.500	0.423		ug/L		85	50 - 150	2	25
PCB-18			0.500	0.331		ug/L		66	50 - 150	1	25
PCB-28			0.500	0.377		ug/L		75	50 - 150	2	25
PCB-44			0.500	0.375		ug/L		75	50 - 150	6	25
PCB-52			0.500	0.384		ug/L		77	50 - 150	5	25
PCB-66			0.500	0.383		ug/L		77	50 - 150	11	25
PCB-101			0.500	0.372		ug/L		74	50 - 150	12	25
PCB-105			0.500	0.358		ug/L		72	50 - 150	8	25
PCB-118			0.500	0.337		ug/L		67	50 - 150	10	25
PCB-128			0.500	0.395		ug/L		79	50 - 150	9	25
PCB-132/153			0.500	0.469		ug/L		94	50 - 150	8	25
PCB-138/158			0.500	0.328		ug/L		66	50 - 150	8	25
PCB-170			0.500	0.352		ug/L		70	50 - 150	12	25
PCB-180			0.500	0.398		ug/L		80	50 - 150	12	25
PCB-187			0.500	0.400		ug/L		80	50 - 150	10	25
PCB-195			0.500	0.374		ug/L		75	50 - 150	13	25
PCB-206			0.500	0.377		ug/L		75	50 - 150	21	25
Decachlorobiphenyl			0.500	0.426		ug/L		85	50 - 150	15	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	79		50 - 150
p-Terphenyl-d14 (Surr)	88		50 - 150

Lab Sample ID: 440-262952-4 MS
Matrix: Water
Analysis Batch: 58315

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57938

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-5/8	ND		0.477	0.471		ug/L		99	50 - 150
PCB-18	ND		0.477	0.367		ug/L		77	50 - 150
PCB-28	ND		0.477	0.444		ug/L		93	50 - 150
PCB-44	ND		0.477	0.417		ug/L		87	50 - 150
PCB-52	ND		0.477	0.438		ug/L		92	50 - 150
PCB-66	ND		0.477	0.433		ug/L		91	50 - 150
PCB-101	ND		0.477	0.416		ug/L		87	50 - 150
PCB-105	ND		0.477	0.384		ug/L		81	50 - 150
PCB-118	ND		0.477	0.383		ug/L		80	50 - 150
PCB-128	ND		0.477	0.459		ug/L		96	50 - 150
PCB-132/153	ND		0.477	0.524		ug/L		110	50 - 150
PCB-138/158	ND		0.477	0.376		ug/L		79	50 - 150

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: 440-262952-4 MS
Matrix: Water
Analysis Batch: 58315

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57938

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-170	ND		0.477	0.427		ug/L		89	50 - 150
PCB-180	ND		0.477	0.468		ug/L		98	50 - 150
PCB-187	ND		0.477	0.463		ug/L		97	50 - 150
PCB-195	ND		0.477	0.453		ug/L		95	50 - 150
PCB-206	ND		0.477	0.530		ug/L		111	50 - 150
Decachlorobiphenyl	ND		0.477	0.574		ug/L		120	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*84*		*50 - 150*
p-Terphenyl-d14 (Surr)	*97*		*50 - 150*

Lab Sample ID: 440-262952-4 MSD
Matrix: Water
Analysis Batch: 58315

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57938

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8	ND		0.480	0.488		ug/L		102	50 - 150	3	25
PCB-18	ND		0.480	0.376		ug/L		78	50 - 150	2	25
PCB-28	ND		0.480	0.461		ug/L		96	50 - 150	4	25
PCB-44	ND		0.480	0.444		ug/L		93	50 - 150	6	25
PCB-52	ND		0.480	0.466		ug/L		97	50 - 150	6	25
PCB-66	ND		0.480	0.454		ug/L		95	50 - 150	5	25
PCB-101	ND		0.480	0.439		ug/L		92	50 - 150	5	25
PCB-105	ND		0.480	0.415		ug/L		86	50 - 150	8	25
PCB-118	ND		0.480	0.402		ug/L		84	50 - 150	5	25
PCB-128	ND		0.480	0.466		ug/L		97	50 - 150	2	25
PCB-132/153	ND		0.480	0.555		ug/L		116	50 - 150	6	25
PCB-138/158	ND		0.480	0.383		ug/L		80	50 - 150	2	25
PCB-170	ND		0.480	0.420		ug/L		88	50 - 150	2	25
PCB-180	ND		0.480	0.477		ug/L		100	50 - 150	2	25
PCB-187	ND		0.480	0.478		ug/L		100	50 - 150	3	25
PCB-195	ND		0.480	0.444		ug/L		93	50 - 150	2	25
PCB-206	ND		0.480	0.506		ug/L		106	50 - 150	5	25
Decachlorobiphenyl	ND		0.480	0.552		ug/L		115	50 - 150	4	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*87*		*50 - 150*
p-Terphenyl-d14 (Surr)	*101*		*50 - 150*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 440-600622/1-A
Matrix: Water
Analysis Batch: 600738

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 600622

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.10	0.020	ug/L		03/16/20 06:00	03/16/20 17:09	1
4,4'-DDT	ND		0.010	0.0040	ug/L		03/16/20 06:00	03/16/20 17:09	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 440-600622/1-A
Matrix: Water
Analysis Batch: 600738

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 600622

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	79		28 - 108	03/16/20 06:00	03/16/20 17:09	1
Tetrachloro-m-xylene	61		10 - 123	03/16/20 06:00	03/16/20 17:09	1

Lab Sample ID: LCS 440-600622/2-A
Matrix: Water
Analysis Batch: 600738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 600622

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4'-DDT			0.400	0.377		ug/L		94	10 - 150		
4,4'-DDT			0.400	0.355		ug/L		89	41 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	88		28 - 108
Tetrachloro-m-xylene	77		10 - 123

Lab Sample ID: 440-262952-4 MS
Matrix: Water
Analysis Batch: 600738

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 600622

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4'-DDT	ND		0.379	0.314		ug/L		83	50 - 125		
4,4'-DDT	ND		0.379	0.297		ug/L		78	50 - 125		

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	71		28 - 108
Tetrachloro-m-xylene	56		10 - 123

Lab Sample ID: 440-262952-4 MSD
Matrix: Water
Analysis Batch: 600738

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 600622

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4'-DDT	ND		0.377	0.330		ug/L		87	50 - 125	5	30
4,4'-DDT	ND		0.377	0.313		ug/L		83	50 - 125	5	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	72		28 - 108
Tetrachloro-m-xylene	56		10 - 123

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-600732/1-A
Matrix: Water
Analysis Batch: 600881

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 600732

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.50	0.50	ug/L		03/16/20 12:54	03/16/20 22:30	1
Lead	ND		0.50	0.50	ug/L		03/16/20 12:54	03/16/20 22:30	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 440-600732/1-A
Matrix: Water
Analysis Batch: 600881

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 600732

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		2.5	2.5	ug/L		03/16/20 12:54	03/16/20 22:30	1

Lab Sample ID: LCS 440-600732/2-A
Matrix: Water
Analysis Batch: 600881

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 600732

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	80.0	74.5		ug/L		93	85 - 115
Lead	80.0	73.8		ug/L		92	85 - 115
Zinc	80.0	78.0		ug/L		97	85 - 115

Lab Sample ID: 440-262952-4 MS
Matrix: Water
Analysis Batch: 600881

Client Sample ID: SG1-031320
Prep Type: Total Recoverable
Prep Batch: 600732

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	5.3		80.0	70.9		ug/L		82	70 - 130
Lead	ND		80.0	64.7		ug/L		81	70 - 130
Zinc	34		80.0	102		ug/L		84	70 - 130

Lab Sample ID: 440-262952-4 MSD
Matrix: Water
Analysis Batch: 600881

Client Sample ID: SG1-031320
Prep Type: Total Recoverable
Prep Batch: 600732

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	5.3		80.0	68.8		ug/L		79	70 - 130	3	20
Lead	ND		80.0	64.8		ug/L		81	70 - 130	0	20
Zinc	34		80.0	103		ug/L		86	70 - 130	1	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-601515/1
Matrix: Water
Analysis Batch: 601515

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			03/19/20 16:45	1

Lab Sample ID: LCS 440-601515/2
Matrix: Water
Analysis Batch: 601515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	1020		mg/L		102	85 - 115

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262952-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: 440-262952-4 DU
Matrix: Water
Analysis Batch: 601515

Client Sample ID: SG1-031320
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	26			25.8		mg/L				0.8	10

QC Association Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262952-1

GC/MS Semi VOA

Prep Batch: 57829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-1	SG1-031320-DW	Total/NA	Water	3510C	
440-262952-2	SG1-031320-DD	Total/NA	Water	3510C	
440-262952-3	SG1-031320-EB	Total/NA	Water	3510C	
440-262952-4	SG1-031320	Total/NA	Water	3510C	
MB 570-57829/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-57829/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-57829/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-262952-4 MS	SG1-031320	Total/NA	Water	3510C	
440-262952-4 MSD	SG1-031320	Total/NA	Water	3510C	

Prep Batch: 57938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-1	SG1-031320-DW	Total/NA	Water	3510C	
440-262952-2	SG1-031320-DD	Total/NA	Water	3510C	
440-262952-3	SG1-031320-EB	Total/NA	Water	3510C	
440-262952-4	SG1-031320	Total/NA	Water	3510C	
MB 570-57938/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-57938/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-57938/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-262952-4 MS	SG1-031320	Total/NA	Water	3510C	
440-262952-4 MSD	SG1-031320	Total/NA	Water	3510C	

Analysis Batch: 58000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-1	SG1-031320-DW	Total/NA	Water	8270C SIM	57829
440-262952-2	SG1-031320-DD	Total/NA	Water	8270C SIM	57829
440-262952-3	SG1-031320-EB	Total/NA	Water	8270C SIM	57829
440-262952-4	SG1-031320	Total/NA	Water	8270C SIM	57829
MB 570-57829/1-A	Method Blank	Total/NA	Water	8270C SIM	57829
LCS 570-57829/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	57829
LCSD 570-57829/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	57829
440-262952-4 MS	SG1-031320	Total/NA	Water	8270C SIM	57829
440-262952-4 MSD	SG1-031320	Total/NA	Water	8270C SIM	57829

Analysis Batch: 58315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-1	SG1-031320-DW	Total/NA	Water	8270C SIM CON	57938
440-262952-2	SG1-031320-DD	Total/NA	Water	8270C SIM CON	57938
440-262952-3	SG1-031320-EB	Total/NA	Water	8270C SIM CON	57938
440-262952-4	SG1-031320	Total/NA	Water	8270C SIM CON	57938
MB 570-57938/1-A	Method Blank	Total/NA	Water	8270C SIM CON	57938
LCS 570-57938/2-A	Lab Control Sample	Total/NA	Water	8270C SIM CON	57938
LCSD 570-57938/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM CON	57938
440-262952-4 MS	SG1-031320	Total/NA	Water	8270C SIM CON	57938
440-262952-4 MSD	SG1-031320	Total/NA	Water	8270C SIM CON	57938

GC Semi VOA

Prep Batch: 600622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-1	SG1-031320-DW	Total/NA	Water	3510C	

GC Semi VOA (Continued)

Prep Batch: 600622 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-2	SG1-031320-DD	Total/NA	Water	3510C	
440-262952-3	SG1-031320-EB	Total/NA	Water	3510C	
440-262952-4	SG1-031320	Total/NA	Water	3510C	
MB 440-600622/1-A	Method Blank	Total/NA	Water	3510C	
LCS 440-600622/2-A	Lab Control Sample	Total/NA	Water	3510C	
440-262952-4 MS	SG1-031320	Total/NA	Water	3510C	
440-262952-4 MSD	SG1-031320	Total/NA	Water	3510C	

Analysis Batch: 600738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-1	SG1-031320-DW	Total/NA	Water	8081A	600622
440-262952-2	SG1-031320-DD	Total/NA	Water	8081A	600622
440-262952-3	SG1-031320-EB	Total/NA	Water	8081A	600622
440-262952-4	SG1-031320	Total/NA	Water	8081A	600622
MB 440-600622/1-A	Method Blank	Total/NA	Water	8081A	600622
LCS 440-600622/2-A	Lab Control Sample	Total/NA	Water	8081A	600622
440-262952-4 MS	SG1-031320	Total/NA	Water	8081A	600622
440-262952-4 MSD	SG1-031320	Total/NA	Water	8081A	600622

Metals

Prep Batch: 600732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-1	SG1-031320-DW	Total Recoverable	Water	200.2	
440-262952-2	SG1-031320-DD	Total Recoverable	Water	200.2	
440-262952-3	SG1-031320-EB	Total Recoverable	Water	200.2	
440-262952-4	SG1-031320	Total Recoverable	Water	200.2	
MB 440-600732/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-600732/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-262952-4 MS	SG1-031320	Total Recoverable	Water	200.2	
440-262952-4 MSD	SG1-031320	Total Recoverable	Water	200.2	

Analysis Batch: 600881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-1	SG1-031320-DW	Total Recoverable	Water	200.8	600732
440-262952-2	SG1-031320-DD	Total Recoverable	Water	200.8	600732
440-262952-3	SG1-031320-EB	Total Recoverable	Water	200.8	600732
440-262952-4	SG1-031320	Total Recoverable	Water	200.8	600732
MB 440-600732/1-A	Method Blank	Total Recoverable	Water	200.8	600732
LCS 440-600732/2-A	Lab Control Sample	Total Recoverable	Water	200.8	600732
440-262952-4 MS	SG1-031320	Total Recoverable	Water	200.8	600732
440-262952-4 MSD	SG1-031320	Total Recoverable	Water	200.8	600732

General Chemistry

Analysis Batch: 601515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262952-1	SG1-031320-DW	Total/NA	Water	SM 2540D	
440-262952-2	SG1-031320-DD	Total/NA	Water	SM 2540D	
440-262952-3	SG1-031320-EB	Total/NA	Water	SM 2540D	
440-262952-4	SG1-031320	Total/NA	Water	SM 2540D	
MB 440-601515/1	Method Blank	Total/NA	Water	SM 2540D	

General Chemistry (Continued)

Analysis Batch: 601515 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-601515/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-262952-4 DU	SG1-031320	Total/NA	Water	SM 2540D	

Definitions/Glossary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262952-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: CH2M Hill, Inc.
Job ID: 440-262952-1
Project/Site: KMEP/SFPP Norwalk Site

Laboratory: Eurofins Calscience Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska	State	CA01531	06-30-20
Arizona	State	AZ0671	10-14-20
California	Los Angeles County Sanitation Districts	10256	06-30-20
California	State	2706	06-30-20
Guam	State	20-004R	01-23-21
Hawaii	State	CA01531	01-29-21
Kansas	NELAP	E-10420	07-31-20
Nevada	State	CA015312020-7	07-31-20
Oregon	NELAP	4028 - 007	01-29-21
USDA	US Federal Programs	P330-18-00214	07-09-21
Washington	State	C900	09-03-20

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

TestAmerica Laboratories

CHAIN OF CUSTODY RECORD

DATE: March 13 2020
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: Ryan Koch	Report To	Eric Davis	Attention	Ryan Koch - Ref AFE# 81195	Sampler Name:	Nils Orliczky
Address	1001 Louisiana St , Houston, TX 77002	Copy To	Ryan Koch	Company Name	Kinder Morgan Energy Partners	Sampler Signature:	
Email To	Ryan_Koch@kindermorgan.com eric.davis@jacobs.com	Purchase Order No.:		Address	1001 Louisiana St , Houston, TX 77002	Sample Date:	3-13-20
Phone	713-420-6730 Fax 714-560-4801	Project Name	SFPP Norwalk	TA Project Manager	Janice Hsu		

Section E (Required Sample Information)

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS	Analysis Test: Total Suspended Solids (SM2540D)	Metals (EPA 200.8 Cu, Pb, Zn)	Pesticides (SW8081A) (2,4-DDT, 4,4-DDT)	PAHs (SW8270A-SIM)	Total PCBs (EPA 1668A)
CONTAINER TYPE								P	P	A	A	A
# OF CONTAINERS								1	1	1	12	1
PRESERVATIVE								--	N	--	--	--
VOLUME (mL)								1000	250	1000	1000	1000
1	SG1-031320-DW	Mouth of San Gabriel River	WW	G	3/13/20	1154	6	X	X	X	X	X
2	SG1-031320-DD	San Gabriel River	WW	G		1155	6	X	X	X	X	X
3	SG1-031320-EB	Equipment Blank	-	-		1145	6	X	X	X	X	X
4	SG1-031320-MS/MSD	MS/MSD	WW	G		1145	12	X	X	X	X	X
5												
6												
7												
8												
9												
10												
11												
12												

440-262952 Chain of Custody

3/13/20 LD

Comments

PAHs: 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene

Pesticides: 2,4-DDT, 4,4-DDT reported as Total DDT

Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
[signature]	3-13-20 / 1711		
Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
		[signature] EC 1120	3/13/20 17 11

IR 43
4-8/5.0
4.0/4.2

Turn Around Time (TAT)

- A = Same Day
- B = 24 Hours
- C = 48 Hours
- D = 72 Hours
- E = 5 Workdays
- F = 10 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM

Special Instruction

Also report pesticides as Total DDT

Matrix			Preservatives			Container Type			
W = Water	WW = Wastewater		H = HCl	N = HNO3	S = H2SO4	T = Tube	V = VOA	P = Plastic	A = Amber
O = Oil	SL = Sludge	S = Soil	Z = ZnAc2	O = NaOH	T = Na2S2O3	J = Jar	B = Tedlar	G = Glass	
Others/Specify			Others/Specify			M = Metal	P = Plastic	C = Cap	

Eurofins Calscience Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone: 949-261-1022 Fax: 949-260-3297

Chain of Custody Record

eurofins | Calscie

Loc: 440
262952

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hsu, Janice	Carrier Tracking No(s):	COC No: 440-153961.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: janice.hsu@testamericainc.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Calscience LLC		Accreditations Required (See note):		Job #: 440-262952-1
Address: 7440 Lincoln Way, ,	Due Date Requested: 3/26/2020			
City: Garden Grove	TAT Requested (days):			
State, Zip: CA, 92841				
Phone: 714-895-5494(Tel) 714-894-7501(Fax)	PO #:			
Email:	WO #:			
Project Name: KMEP/SFPP Norwalk Site	Project #: 44011238			
Site: KMEP Norwalk Airs	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270C_SIM_PAH/3510C SIM PAH	8270C_SIM_CON/3510C (MOD) SIM Congeners	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SG1-031320-DW (440-262952-1)	3/13/20	11:55 Pacific		Water			X	X	2	
SG1-031320-DD (440-262952-2)	3/13/20	11:55 Pacific		Water			X	X	2	
SG1-031320-EB (440-262952-3)	3/13/20	11:45 Pacific		Water			X	X	2	
SG1-031320 (440-262952-4)	3/13/20	11:55 Pacific		Water			X	X	2	
SG1-031320 (440-262952-4MS)	3/13/20	11:55 Pacific	MS	Water			X	X	2	
SG1-031320 (440-262952-4MSD)	3/13/20	11:55 Pacific	MSD	Water			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Teresa Ochoa	Date/Time: 3.16.20	Company ECIRN	Received by:	Date/Time: 3/16/20	670	Company
Relinquished by:	Date/Time: 3/16/20 1630	Company EC	Received by:	Date/Time: 3/16/20	1630	Company EC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:		Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

3-6 / 2.7

Ver: 01/16/2019

3/27/2020

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 440-262952-1

Login Number: 262952
List Number: 1
Creator: Dolidze, Lado

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	Insufficient volume received for MS/MSD.
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 440-262952-1

Login Number: 262952
List Number: 2
Creator: Andujo, Italy

List Source: Eurofins Calscience
List Creation: 03/16/20 09:58 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 440-262952-1

Login Number: 262952
List Number: 3
Creator: Andujo, Italy

List Source: Eurofins Calscience
List Creation: 03/16/20 10:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

SWAMP Field Data Sheet (Sediment Chemistry) - EventType=WQ | Entered in d-base (initial/date) | Pg 1 of 1 Pgs

*StationID: _____ | *Date (mm/dd/yyyy): 03 / 13 / 2020 | *Group: | *Agency:

*Funding: _____ | ArrivalTime: 10 15 | DepartureTime: 1530 | *SampleTime (1st sample): 1445 | *Protocol:

*ProjectCode: | *Personnel: N. Orlczky, N. Harris | *Purpose (circle applicable): (SedChem) SedTox Habitat Benthic | *PurposeFailure:

*Location: Bank Thalweg (Midchannel) OpenWater

GPS Device: Google Earth

Datum: NAD83 | Accuracy (ft / m): 1.59m

Datum: NAD83 | Accuracy (ft / m):

*GPS/DGPS	Lat (dd.ddddd)	Long (ddd.ddddd)
Target:	33.74821	-118.112072
*Actual:	33.747027	-118.113248

Same as Water/Probe Collection? (YES) NO

OCCUPATION METHOD: Walk-in Bridge R/V _____ Other

STARTING BANK (facing downstream): LB / RB / NA

Point of Sample (if Integrated, then -88 in dbase)

DISTANCE FROM BANK (m): 49

STREAM WIDTH (m): 109

WATER DEPTH (m): 4.32 ft

HYDROMODIFICATION: None, Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other

LOCATION (to sample): US / DS / WI / NA

Habitat Observations (CollectionMethod = Habitat_generic) **Only complete Sed Observations (bolded) if WQ Observations are already recorded

WADEABILITY: Y / (N) / Unk

BEAUFORT SCALE see Attachtment 1

SITE ODOR: (None),Sulfides,Sewage,Petroleum,Smoke,Other_____

SKY CODE: Clear, Partly Cloudy, (Overcast), Fog, Smoky, Hazy

WIND DIRECTION (from): W

OTHERPRESENCE: Vascular,Nonvascular,OilySheen,Foam,(Trash),Other_____

DOMINANTSUBSTRATE: Bedrock, Concrete, Cobble, Boulder, Gravel, (Sand), Mud, Unk, Other_____

PHOTOS (RB & LB assigned when facing downstream; RENAME to StationCode_yyyy_mm_dd_uniquecode): 1: (RB / LB / BB / US / DS / ##)

SEDODOR: (None), Sulfides, Sewage, Petroleum, Mixed, Other_____

PRECIPITATION: None, Fog, Drizzle, (Rain), Snow

2: (RB / LB / BB / US / DS / ##)

SEDCOLOR: Colorless, Green, Yellow, Brown

PRECIPITATION (last 24 hrs): Unknown, <1", (>1"), None

SEDCOMPOSITION: Silt/Clay, FineSand, (CoarseSand), Gravel, Cobble, Mixed, HardPanCla

EVIDENCE OF FIRES: (No), <1 years, <5 years

3: (RB / LB / BB / US / DS / ##)

OBSERVED FLOW: NA, Dry Waterbody Bed, No Obs Flow, Isolated Pool, Trickle (<0.1cfs), 0.1-1cfs, 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, (>200cfs)

Samples Taken (# of containers filled) - Method=Sed_Grab

Field Dup YES / (NO) (SampleType = Grab / Integrated; LABEL_ID = FieldQA; create collection record upon data entry

COLLECTION DEVICE: Scoop (SS / PC / PE), Core (SS / PC / PE), Grab (Van Veen / Eckman / (Petite Ponar)

COLLECTION DEVICE AREA (m2): 4

Sample Type:	DepthCollec (cm)	Equipment Used	Sediment Only (Y / N)	Grain Size/TOC	Organics	Metals/HgT	Selenium	Toxicity	SWI	Archive Chemistry	Benthic Infauna	Benthic Coll. Area (m^2)	Sieve Size (mm)
Integrated Grab	surface at Bottom riverbed	Petite Ponar		Sent to lab									
Integrated Grab													
Integrated Grab													
Integrated Grab													

COMMENTS: Petite Ponar grab sampler from bridge over San Gabriel river

Modified 06/27/08

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-262954-1
Client Project/Site: KMEP/SFPP Norwalk Site

For:
CH2M Hill, Inc.
6 Hutton Centre Drive, Suite 700
Santa Ana, California 92707

Attn: Eric Davis

Authorized for release by:
3/30/2020 9:56:30 AM

Janice Hsu, Project Manager I
(949)260-3263
janice.hsu@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Sample Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262954-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-262954-1	SG1-031320-SS	Solid	03/13/20 14:44	03/13/20 17:11	
440-262954-2	SG1-031320-SD	Solid	03/13/20 14:44	03/13/20 17:11	
440-262954-3	SG1-031320-SS-EB	Water	03/13/20 12:05	03/13/20 17:11	
440-262954-4	SG1-031320	Solid	03/13/20 14:45	03/13/20 17:11	

Job ID: 440-262954-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative
440-262954-1

Comments
No additional comments.

Receipt
The samples were received on 3/13/2020 5:11 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.1° C and 5.2° C.

GC/MS Semi VOA
Method 8270C SIM CON: The continuing calibration verification (CCV) associated with batch 570-58315 recovered above the upper control limit for DCB Decachlorobiphenyl. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 570-58315/3).

Method 8270C SIM: The sample size used in the preparation of the matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-57878 and analytical batch 570-58000 was outside the 10% difference. As the relative percent difference (RPD) calculation is based upon the MS/MSD concentration as opposed to the MS/MSD percent recovery, elevated %RPD values were obtained.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 200.8 LL: The method blank for preparation batch 440-601392 and analytical batch 440-601500 contained Chromium, Copper and Zinc above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 200.8 LL: The method blank for preparation batch 440-601392 and analytical batch 440-601500 contained Nickel above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method 200.8 LL: The continuing calibration blank (CCB) for 440-601500 contained Lead above the method detection limit (MDL). This target analyte concentration was less than the reporting limit (RL). (CCB 440-601500/24)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-57829.LCS/LCSD was performed to meet QC requirement.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: SG1-031320-SS

Date Collected: 03/13/20 14:44
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262954-1

Matrix: Solid

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.40	0.077	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-18	ND		0.20	0.065	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-28	ND		0.20	0.069	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-44	ND		0.20	0.15	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-52	ND		0.20	0.19	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-66	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-101	ND		0.20	0.044	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-105	ND		0.20	0.053	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-118	ND		0.20	0.035	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-128	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-132/153	ND		0.40	0.16	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-138/158	ND		0.40	0.35	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-170	ND		0.20	0.11	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-180	ND		0.20	0.092	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-187	ND		0.20	0.10	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-195	ND		0.20	0.060	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
PCB-206	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 21:13	1
Decachlorobiphenyl	ND		0.20	0.061	ug/Kg		03/17/20 17:50	03/19/20 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*54*		*14 - 146*	*03/17/20 17:50*	*03/19/20 21:13*	*1*
p-Terphenyl-d14 (Surr)	*88*		*34 - 148*	*03/17/20 17:50*	*03/19/20 21:13*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		20	1.5	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
2-Methylnaphthalene	ND		20	1.5	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Acenaphthene	ND		20	1.0	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Anthracene	ND		20	1.4	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Benzo[a]anthracene	**4.8**	**J**	20	2.2	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Benzo[a]pyrene	**7.9**	**J**	20	2.7	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Chrysene	**4.1**	**J**	20	1.6	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Dibenz(a,h)anthracene	**4.4**	**J *1**	20	2.2	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Fluoranthene	**3.9**	**J**	20	2.0	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Fluorene	ND		20	1.7	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Naphthalene	ND		20	1.6	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Phenanthrene	ND		20	1.7	ug/Kg		03/17/20 17:06	03/18/20 23:23	1
Pyrene	**3.6**	**J**	20	1.5	ug/Kg		03/17/20 17:06	03/18/20 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*75*		*22 - 130*	*03/17/20 17:06*	*03/18/20 23:23*	*1*
Nitrobenzene-d5 (Surr)	*70*		*20 - 145*	*03/17/20 17:06*	*03/18/20 23:23*	*1*
p-Terphenyl-d14 (Surr)	*78*		*33 - 147*	*03/17/20 17:06*	*03/18/20 23:23*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
4,4'-DDE	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
4,4'-DDT	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Aldrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1

Client Sample ID: SG1-031320-SS
Date Collected: 03/13/20 14:44
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262954-1
Matrix: Solid

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
beta-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Chlordane (technical)	ND		40	15	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
delta-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Dieldrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Endosulfan I	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Endosulfan II	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Endosulfan sulfate	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Endrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Endrin aldehyde	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Endrin ketone	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
gamma-BHC (Lindane)	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
trans-Chlordane	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Heptachlor	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Heptachlor epoxide	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Methoxychlor	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:48	1
Toxaphene	ND		40	20	ug/Kg		03/18/20 05:37	03/18/20 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*28 - 115*	*03/18/20 05:37*	*03/18/20 17:48*	*1*
DCB Decachlorobiphenyl (Surr)	*33*		*21 - 117*	*03/18/20 05:37*	*03/18/20 17:48*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.49	0.25	mg/Kg		03/18/20 08:30	03/18/20 15:38	20
Copper	**3.7**		0.98	0.49	mg/Kg		03/18/20 08:30	03/18/20 15:38	20
Lead	**3.2**		0.49	0.25	mg/Kg		03/18/20 08:30	03/18/20 15:38	20
Nickel	**2.2**		0.98	0.49	mg/Kg		03/18/20 08:30	03/18/20 15:38	20
Zinc	**16**		9.8	4.9	mg/Kg		03/18/20 08:30	03/18/20 15:38	20

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.012	mg/Kg		03/23/20 14:52	03/24/20 00:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon, Total Organic	**670**		500	170	mg/Kg			03/17/20 11:44	1

Method: D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Coarse Sand (0.5mm)	**26.6**		0.01	0.01	%			03/20/20 16:00	1
Fine Sand (0.125)	**2.0**		0.01	0.01	%			03/20/20 16:00	1
Gravel (2 mm)	ND		0.01	0.01	%			03/20/20 16:00	1
Medium Sand (0.25 mm)	**70.0**		0.01	0.01	%			03/20/20 16:00	1
Very Fine Sand (0.0625 mm)	**0.1**		0.01	0.01	%			03/20/20 16:00	1
Total Silt and Clay (Bottom)	**0.06**		0.01	0.01	%			03/20/20 16:00	1
Very Coarse Sand (1mm)	**1.0**		0.01	0.01	%			03/20/20 16:00	1

Client Sample ID: SG1-031320-SD
Lab Sample ID: 440-262954-2
Date Collected: 03/13/20 14:44
Matrix: Solid
Date Received: 03/13/20 17:11

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.40	0.076	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-18	ND		0.20	0.064	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-28	ND		0.20	0.069	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-44	ND		0.20	0.15	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-52	ND		0.20	0.19	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-66	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-101	ND		0.20	0.044	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-105	ND		0.20	0.053	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-118	ND		0.20	0.034	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-128	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-132/153	ND		0.40	0.16	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-138/158	ND		0.40	0.35	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-170	ND		0.20	0.11	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-180	ND		0.20	0.091	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-187	ND		0.20	0.10	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-195	ND		0.20	0.059	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
PCB-206	ND		0.20	0.11	ug/Kg		03/17/20 17:50	03/19/20 21:36	1
Decachlorobiphenyl	ND		0.20	0.061	ug/Kg		03/17/20 17:50	03/19/20 21:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*51*		*14 - 146*	*03/17/20 17:50*	*03/19/20 21:36*	*1*
p-Terphenyl-d14 (Surr)	*93*		*34 - 148*	*03/17/20 17:50*	*03/19/20 21:36*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		20	1.4	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
2-Methylnaphthalene	ND		20	1.4	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Acenaphthene	ND		20	1.0	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Anthracene	ND		20	1.3	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Benzo[a]anthracene	ND		20	2.2	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Benzo[a]pyrene	ND		20	2.7	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Chrysene	ND		20	1.6	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Dibenz(a,h)anthracene	ND	*1	20	2.1	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Fluoranthene	ND		20	1.9	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Fluorene	ND		20	1.7	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Naphthalene	ND		20	1.6	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Phenanthrene	ND		20	1.7	ug/Kg		03/17/20 17:06	03/18/20 23:42	1
Pyrene	ND		20	1.5	ug/Kg		03/17/20 17:06	03/18/20 23:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*22 - 130*	*03/17/20 17:06*	*03/18/20 23:42*	*1*
Nitrobenzene-d5 (Surr)	*76*		*20 - 145*	*03/17/20 17:06*	*03/18/20 23:42*	*1*
p-Terphenyl-d14 (Surr)	*77*		*33 - 147*	*03/17/20 17:06*	*03/18/20 23:42*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
4,4'-DDE	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
4,4'-DDT	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Aldrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1

Client Sample ID: SG1-031320-SD
Lab Sample ID: 440-262954-2
Date Collected: 03/13/20 14:44
Matrix: Solid
Date Received: 03/13/20 17:11

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
beta-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Chlordane (technical)	ND		40	15	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
delta-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Dieldrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Endosulfan I	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Endosulfan II	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Endosulfan sulfate	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Endrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Endrin aldehyde	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Endrin ketone	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
gamma-BHC (Lindane)	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
trans-Chlordane	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Heptachlor	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Heptachlor epoxide	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Methoxychlor	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 18:14	1
Toxaphene	ND		40	20	ug/Kg		03/18/20 05:37	03/18/20 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*28 - 115*	*03/18/20 05:37*	*03/18/20 18:14*	*1*
DCB Decachlorobiphenyl (Surr)	*37*		*21 - 117*	*03/18/20 05:37*	*03/18/20 18:14*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.50	0.25	mg/Kg		03/18/20 08:30	03/18/20 15:40	20
Copper	**4.0**		1.0	0.50	mg/Kg		03/18/20 08:30	03/18/20 15:40	20
Lead	**3.5**		0.50	0.25	mg/Kg		03/18/20 08:30	03/18/20 15:40	20
Nickel	**2.4**		1.0	0.50	mg/Kg		03/18/20 08:30	03/18/20 15:40	20
Zinc	**19**		10	5.0	mg/Kg		03/18/20 08:30	03/18/20 15:40	20

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.016**	**J**	0.020	0.012	mg/Kg		03/23/20 14:52	03/24/20 00:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon, Total Organic	**1700**		500	170	mg/Kg			03/17/20 11:44	1

Client Sample ID: SG1-031320-SS-EB
Lab Sample ID: 440-262954-3
Date Collected: 03/13/20 12:05
Matrix: Water
Date Received: 03/13/20 17:11

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0038	0.00049	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-18	ND		0.0019	0.00044	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-28	ND		0.0019	0.00050	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-44	ND		0.0019	0.00068	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-52	ND		0.0019	0.00053	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-66	ND		0.0019	0.00038	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-101	ND		0.0019	0.00047	ug/L		03/18/20 06:55	03/19/20 18:26	1

Client Sample ID: SG1-031320-SS-EB
Lab Sample ID: 440-262954-3

Date Collected: 03/13/20 12:05
Matrix: Water
Date Received: 03/13/20 17:11

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-105	ND		0.0019	0.00045	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-118	ND		0.0019	0.00048	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-128	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-132/153	ND		0.0038	0.00066	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-138/158	ND		0.0038	0.00057	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-170	ND		0.0019	0.00040	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-180	ND		0.0019	0.00058	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-187	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-195	ND		0.0019	0.00071	ug/L		03/18/20 06:55	03/19/20 18:26	1
PCB-206	ND		0.0019	0.00041	ug/L		03/18/20 06:55	03/19/20 18:26	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		03/18/20 06:55	03/19/20 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*84*		*50 - 150*	*03/18/20 06:55*	*03/19/20 18:26*	*1*
p-Terphenyl-d14 (Surr)	*94*		*50 - 150*	*03/18/20 06:55*	*03/19/20 18:26*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.010	ug/L		03/17/20 14:08	03/18/20 22:05	1
2-Methylnaphthalene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 22:05	1
Acenaphthene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 22:05	1
Acenaphthylene	ND		0.20	0.010	ug/L		03/17/20 14:08	03/18/20 22:05	1
Anthracene	ND		0.20	0.014	ug/L		03/17/20 14:08	03/18/20 22:05	1
Benzo[g,h,i]perylene	ND		0.20	0.021	ug/L		03/17/20 14:08	03/18/20 22:05	1
Benzo[k]fluoranthene	ND		0.20	0.010	ug/L		03/17/20 14:08	03/18/20 22:05	1
Benzo[a]anthracene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 22:05	1
Benzo[a]pyrene	ND		0.20	0.018	ug/L		03/17/20 14:08	03/18/20 22:05	1
Benzo[b]fluoranthene	ND		0.20	0.022	ug/L		03/17/20 14:08	03/18/20 22:05	1
Chrysene	ND		0.20	0.022	ug/L		03/17/20 14:08	03/18/20 22:05	1
Dibenz(a,h)anthracene	ND		0.20	0.018	ug/L		03/17/20 14:08	03/18/20 22:05	1
Fluoranthene	ND		0.20	0.014	ug/L		03/17/20 14:08	03/18/20 22:05	1
Fluorene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 22:05	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.021	ug/L		03/17/20 14:08	03/18/20 22:05	1
Naphthalene	ND		0.20	0.014	ug/L		03/17/20 14:08	03/18/20 22:05	1
Phenanthrene	**0.0059**	**J**	0.20	0.0050	ug/L		03/17/20 14:08	03/18/20 22:05	1
Pyrene	**0.026**	**J**	0.20	0.012	ug/L		03/17/20 14:08	03/18/20 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*33 - 144*	*03/17/20 14:08*	*03/18/20 22:05*	*1*
Nitrobenzene-d5 (Surr)	*73*		*28 - 139*	*03/17/20 14:08*	*03/18/20 22:05*	*1*
p-Terphenyl-d14 (Surr)	*74*		*23 - 160*	*03/17/20 14:08*	*03/18/20 22:05*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.0047	0.0038	ug/L		03/16/20 06:00	03/16/20 18:54	1
4,4'-DDE	ND		0.0047	0.0028	ug/L		03/16/20 06:00	03/16/20 18:54	1
4,4'-DDT	ND		0.0095	0.0038	ug/L		03/16/20 06:00	03/16/20 18:54	1
Aldrin	ND		0.0047	0.0014	ug/L		03/16/20 06:00	03/16/20 18:54	1
alpha-BHC	ND		0.0047	0.0024	ug/L		03/16/20 06:00	03/16/20 18:54	1
beta-BHC	ND		0.0095	0.0038	ug/L		03/16/20 06:00	03/16/20 18:54	1

Client Sample ID: SG1-031320-SS-EB

Lab Sample ID: 440-262954-3

Date Collected: 03/13/20 12:05

Matrix: Water

Date Received: 03/13/20 17:11

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.095	0.076	ug/L		03/16/20 06:00	03/16/20 18:54	1
delta-BHC	ND		0.0047	0.0033	ug/L		03/16/20 06:00	03/16/20 18:54	1
Dieldrin	ND		0.0047	0.0019	ug/L		03/16/20 06:00	03/16/20 18:54	1
Endosulfan I	ND		0.0047	0.0028	ug/L		03/16/20 06:00	03/16/20 18:54	1
Endosulfan II	ND		0.0047	0.0019	ug/L		03/16/20 06:00	03/16/20 18:54	1
Endosulfan sulfate	ND		0.0095	0.0028	ug/L		03/16/20 06:00	03/16/20 18:54	1
Endrin	ND		0.0047	0.0019	ug/L		03/16/20 06:00	03/16/20 18:54	1
Endrin aldehyde	ND		0.0095	0.0019	ug/L		03/16/20 06:00	03/16/20 18:54	1
Endrin ketone	ND		0.0095	0.0066	ug/L		03/16/20 06:00	03/16/20 18:54	1
gamma-BHC (Lindane)	ND		0.0095	0.0028	ug/L		03/16/20 06:00	03/16/20 18:54	1
trans-Chlordane	ND		0.095	0.028	ug/L		03/16/20 06:00	03/16/20 18:54	1
Heptachlor	ND		0.0095	0.0028	ug/L		03/16/20 06:00	03/16/20 18:54	1
Heptachlor epoxide	ND		0.0047	0.0024	ug/L		03/16/20 06:00	03/16/20 18:54	1
Methoxychlor	ND		0.0047	0.0033	ug/L		03/16/20 06:00	03/16/20 18:54	1
Toxaphene	ND		0.47	0.24	ug/L		03/16/20 06:00	03/16/20 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*62*		*10 - 123*	*03/16/20 06:00*	*03/16/20 18:54*	*1*
DCB Decachlorobiphenyl (Surr)	*74*		*28 - 108*	*03/16/20 06:00*	*03/16/20 18:54*	*1*

Method: 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**0.30**		0.10	0.050	ug/L		03/19/20 08:43	03/19/20 15:47	1
Copper	**1.2**	**B**	0.50	0.25	ug/L		03/19/20 08:43	03/19/20 15:47	1
Lead	**0.37**		0.10	0.050	ug/L		03/19/20 08:43	03/19/20 15:47	1
Nickel	**2.2**	**B**	0.20	0.15	ug/L		03/19/20 08:43	03/19/20 15:47	1
Zinc	**14**	**B**	5.0	2.0	ug/L		03/19/20 08:43	03/19/20 15:47	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		03/24/20 18:25	03/25/20 02:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.65	mg/L			03/26/20 17:05	1

Client Sample ID: SG1-031320

Lab Sample ID: 440-262954-4

Date Collected: 03/13/20 14:45

Matrix: Solid

Date Received: 03/13/20 17:11

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.40	0.077	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-18	ND		0.20	0.065	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-28	ND		0.20	0.069	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-44	ND		0.20	0.15	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-52	ND		0.20	0.19	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-66	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-101	ND		0.20	0.044	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-105	ND		0.20	0.053	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-118	ND		0.20	0.035	ug/Kg		03/17/20 17:50	03/19/20 22:00	1

Client Sample ID: SG1-031320

Date Collected: 03/13/20 14:45
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262954-4

Matrix: Solid

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-128	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-132/153	ND		0.40	0.16	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-138/158	ND		0.40	0.35	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-170	ND		0.20	0.11	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-180	ND		0.20	0.092	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-187	ND		0.20	0.10	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-195	ND		0.20	0.060	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
PCB-206	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 22:00	1
Decachlorobiphenyl	ND		0.20	0.061	ug/Kg		03/17/20 17:50	03/19/20 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*41*		*14 - 146*	*03/17/20 17:50*	*03/19/20 22:00*	*1*
p-Terphenyl-d14 (Surr)	*85*		*34 - 148*	*03/17/20 17:50*	*03/19/20 22:00*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		20	1.4	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
2-Methylnaphthalene	ND		20	1.4	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Acenaphthene	ND		20	1.0	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Anthracene	ND		20	1.3	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Benzo[a]anthracene	**12**	**J**	20	2.2	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Benzo[a]pyrene	**19**	**J**	20	2.7	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Chrysene	**19**	**J**	20	1.5	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Dibenz(a,h)anthracene	**7.8**	**J *1**	20	2.1	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Fluoranthene	**17**	**J F2**	20	1.9	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Fluorene	ND		20	1.7	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Naphthalene	**1.6**	**J**	20	1.5	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Phenanthrene	**3.6**	**J**	20	1.7	ug/Kg		03/17/20 17:06	03/18/20 22:24	1
Pyrene	**17**	**J**	20	1.5	ug/Kg		03/17/20 17:06	03/18/20 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*86*		*22 - 130*	*03/17/20 17:06*	*03/18/20 22:24*	*1*
Nitrobenzene-d5 (Surr)	*83*		*20 - 145*	*03/17/20 17:06*	*03/18/20 22:24*	*1*
p-Terphenyl-d14 (Surr)	*82*		*33 - 147*	*03/17/20 17:06*	*03/18/20 22:24*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
4,4'-DDE	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
4,4'-DDT	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Aldrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
alpha-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
beta-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Chlordane (technical)	ND		40	15	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
delta-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Dieldrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Endosulfan I	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Endosulfan II	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Endosulfan sulfate	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Endrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262954-1

Client Sample ID: SG1-031320
Date Collected: 03/13/20 14:45
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262954-4
Matrix: Solid

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin aldehyde	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Endrin ketone	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
gamma-BHC (Lindane)	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
trans-Chlordane	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Heptachlor	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Heptachlor epoxide	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Methoxychlor	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 17:22	1
Toxaphene	ND		40	20	ug/Kg		03/18/20 05:37	03/18/20 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*28 - 115*	*03/18/20 05:37*	*03/18/20 17:22*	*1*
DCB Decachlorobiphenyl (Surr)	*31*		*21 - 117*	*03/18/20 05:37*	*03/18/20 17:22*	*1*

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.50	0.25	mg/Kg		03/18/20 08:30	03/18/20 15:19	20
Copper	**3.6**		1.0	0.50	mg/Kg		03/18/20 08:30	03/18/20 15:19	20
Lead	**3.3**		0.50	0.25	mg/Kg		03/18/20 08:30	03/18/20 15:19	20
Nickel	**2.4**		1.0	0.50	mg/Kg		03/18/20 08:30	03/18/20 15:19	20
Zinc	**16**		10	5.0	mg/Kg		03/18/20 08:30	03/18/20 15:19	20

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.012	mg/Kg		03/23/20 14:52	03/24/20 00:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon, Total Organic	**810**		500	170	mg/Kg			03/17/20 11:44	1

ASTM D422-63(M) Raw Data Logbook (Calculation)

METHOD	ECI ID #	DUPLICATE BATCH NUMBER	ANALYST ID #	REPORT DATE/TIME
ASTM D422-63(M)	440-262594C1		1106	2020-03-20 17:22

SIEVES			MATERIAL			
	MASS (g)				CUMULATIVE	
MESH #	INITIAL	FINAL	MASS (g)	PERCENT (%)	PERCENT (%)	CLASSIFICATION
4						
5						
6						
7						
8						
10	427.01	427.01	0.00	0.00	0.00	Gravel
18	377.03	377.54	0.51	1.02	1.02	Very Coarse Sand
35	350.07	363.36	13.29	26.56	27.58	Coarse Sand
60	318.91	353.92	35.01	69.98	97.56	Medium Sand
120	319.09	320.11	1.02	2.04	99.60	Fine Sand
200						
230	306.34	306.39	0.05	0.10	99.70	Very Fine Sand
Collection	359.82	359.85	0.03	0.06	99.76	Total Silt and Clay

SAMPLE MASS (g)		SAMPLE LOSS		
INITIAL	FINAL	MASS (g)	PERCENT (%)	CONTROL LIMIT
50.03	49.91	0.12	0.24	0.00 – 0.50

METHOD	ECI ID #	DUPLICATE BATCH NUMBER	ANALYST ID #	REPORT DATE/TIME
ASTM D422-63(M)	440-262594C1-DUP		1106	2020-03-20 17:22

SIEVES			MATERIAL			
	MASS (g)				CUMULATIVE	
MESH #	INITIAL	FINAL	MASS (g)	PERCENT (%)	PERCENT (%)	CLASSIFICATION
4						
5						
6						
7						
8						
10	427.02	427.02	0.00	0.00	0.00	Gravel
18	377.01	377.53	0.52	1.03	1.03	Very Coarse Sand
35	350.08	363.36	13.28	26.39	27.42	Coarse Sand
60	318.93	353.99	35.06	69.67	97.10	Medium Sand
120	319.09	320.25	1.16	2.31	99.40	Fine Sand
200						
230	306.36	306.44	0.08	0.16	99.56	Very Fine Sand
Collection	359.82	359.88	0.06	0.12	99.68	Total Silt and Clay

SAMPLE MASS (g)		SAMPLE LOSS		
INITIAL	FINAL	MASS (g)	PERCENT (%)	CONTROL LIMIT
50.32	50.16	0.16	0.32	0.00 – 0.50

Comments:

Mesh 10: 10SSFS99809

Mesh 18: 18SSF554847

Mesh 35: 162513530

Mesh 60: 60SS8F555020

Mesh 120: 140619910

Mesh 230: 141114533

Balance #69

BOOK NUMBER	PAGE	REVIEWER ID #

Method Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262954-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs (GC/MS SIM)	SW846	ECL 1
8270C SIM CON	PCB Congeners (GC/MS)	SW846	ECL 1
8081A	Organochlorine Pesticides (GC)	SW846	TAL IRV
200.8 LL	Metals (ICP/MS)	EPA	TAL IRV
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV
7471A	Mercury (CVAA)	SW846	TAL IRV
9060A	Organic Carbon, Total (TOC)	SW846	ECL 1
SM 5310B	Organic Carbon, Total (TOC)	SM	TAL IRV
D422	Grain Size	ASTM	ECL 3
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
3050B	Preparation, Metals	SW846	TAL IRV
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ECL 1
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL IRV
3541	Automated Soxhlet Extraction	SW846	ECL 1
3545	Pressurized Fluid Extraction	SW846	ECL 1
3546	Microwave Extraction	SW846	TAL IRV
7470A	Preparation, Mercury	SW846	TAL IRV
7471A	Preparation, Mercury	SW846	TAL IRV

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 3 = Eurofins Calscience LLC Knott, 11380 Knott Street, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: CH2M Hill, Inc.
Job ID: 440-262954-1
Project/Site: KMEP/SFPP Norwalk Site

Client Sample ID: SG1-031320-SS
Lab Sample ID: 440-262954-1
Date Collected: 03/13/20 14:44
Matrix: Solid
Date Received: 03/13/20 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3545			9.86 g	2 mL	57878	03/17/20 17:06	F7UI	ECL 1
Total/NA	Analysis	8270C SIM		1			58000	03/18/20 23:23	AJ2Q	ECL 1
Total/NA	Prep	3541			20.0 g	2 mL	57895	03/17/20 17:50	UM1W	ECL 1
Total/NA	Analysis	8270C SIM CON		1			58315	03/19/20 21:13	AJ2Q	ECL 1
Total/NA	Prep	3546			15.00 g	2 mL	601087	03/18/20 05:37	L1A	TAL IRV
Total/NA	Analysis	8081A		1			601158	03/18/20 17:48	D1D	TAL IRV
Total/NA	Prep	3050B			2.04 g	50 mL	600994	03/18/20 08:30	NE1	TAL IRV
Total/NA	Analysis	6020		20			601274	03/18/20 15:38	EMS	TAL IRV
Total/NA	Prep	7471A			0.50 g	50 mL	601722	03/23/20 14:52	DB	TAL IRV
Total/NA	Analysis	7471A		1			602094	03/24/20 00:41	MEM	TAL IRV
Total/NA	Analysis	9060A		1	207.3 mg	207.3 mg	58288	03/17/20 11:44	UAPD	ECL 1
Total/NA	Analysis	D422		1			58680	03/20/20 16:00	C4LT	ECL 3

Client Sample ID: SG1-031320-SD
Lab Sample ID: 440-262954-2
Date Collected: 03/13/20 14:44
Matrix: Solid
Date Received: 03/13/20 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3545			9.97 g	2 mL	57878	03/17/20 17:06	F7UI	ECL 1
Total/NA	Analysis	8270C SIM		1			58000	03/18/20 23:42	AJ2Q	ECL 1
Total/NA	Prep	3541			20.2 g	2 mL	57895	03/17/20 17:50	UM1W	ECL 1
Total/NA	Analysis	8270C SIM CON		1			58315	03/19/20 21:36	AJ2Q	ECL 1
Total/NA	Prep	3546			15.06 g	2 mL	601087	03/18/20 05:37	L1A	TAL IRV
Total/NA	Analysis	8081A		1			601158	03/18/20 18:14	D1D	TAL IRV
Total/NA	Prep	3050B			2.01 g	50 mL	600994	03/18/20 08:30	NE1	TAL IRV
Total/NA	Analysis	6020		20			601274	03/18/20 15:40	EMS	TAL IRV
Total/NA	Prep	7471A			0.51 g	50 mL	601722	03/23/20 14:52	DB	TAL IRV
Total/NA	Analysis	7471A		1			602094	03/24/20 00:49	MEM	TAL IRV
Total/NA	Analysis	9060A		1	204.3 mg	204.3 mg	58288	03/17/20 11:44	UAPD	ECL 1

Client Sample ID: SG1-031320-SS-EB
Lab Sample ID: 440-262954-3
Date Collected: 03/13/20 12:05
Matrix: Water
Date Received: 03/13/20 17:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1020.7 mL	2 mL	57829	03/17/20 14:08	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM		1			58000	03/18/20 22:05	AJ2Q	ECL 1
Total/NA	Prep	3510C			1047.5 mL	1 mL	57938	03/18/20 06:55	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM CON		1			58315	03/19/20 18:26	AJ2Q	ECL 1
Total/NA	Prep	3510C			1055 mL	2 mL	600622	03/16/20 06:00	L1H	TAL IRV
Total/NA	Analysis	8081A		1			600738	03/16/20 18:54	D1D	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	601392	03/19/20 08:43	EP	TAL IRV
Total Recoverable	Analysis	200.8 LL		1			601500	03/19/20 15:47	P1R	TAL IRV
Total/NA	Prep	7470A			20 mL	20 mL	602192	03/24/20 18:25	DB	TAL IRV
Total/NA	Analysis	7470A		1			602330	03/25/20 02:57	MEM	TAL IRV

Lab Chronicle

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262954-1

Client Sample ID: SG1-031320-SS-EB

Date Collected: 03/13/20 12:05
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262954-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5310B		1	100 mL	100 mL	602613	03/26/20 17:05	YZ	TAL IRV

Client Sample ID: SG1-031320

Date Collected: 03/13/20 14:45
Date Received: 03/13/20 17:11

Lab Sample ID: 440-262954-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3545			10.02 g	2 mL	57878	03/17/20 17:06	F7UI	ECL 1
Total/NA	Analysis	8270C SIM		1			58000	03/18/20 22:24	AJ2Q	ECL 1
Total/NA	Prep	3541			20.0 g	2 mL	57895	03/17/20 17:50	UM1W	ECL 1
Total/NA	Analysis	8270C SIM CON		1			58315	03/19/20 22:00	AJ2Q	ECL 1
Total/NA	Prep	3546			15.09 g	2 mL	601087	03/18/20 05:37	L1A	TAL IRV
Total/NA	Analysis	8081A		1			601158	03/18/20 17:22	D1D	TAL IRV
Total/NA	Prep	3050B			2.00 g	50 mL	600994	03/18/20 08:30	NE1	TAL IRV
Total/NA	Analysis	6020		20			601274	03/18/20 15:19	EMS	TAL IRV
Total/NA	Prep	7471A			0.51 g	50 mL	601722	03/23/20 14:52	DB	TAL IRV
Total/NA	Analysis	7471A		1			602094	03/24/20 00:34	MEM	TAL IRV
Total/NA	Analysis	9060A		1	209 mg	209 mg	58288	03/17/20 11:44	UAPD	ECL 1

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 3 = Eurofins Calscience LLC Knott, 11380 Knott Street, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Method: 8270C SIM - PAHs (GC/MS SIM)

Lab Sample ID: MB 570-57829/1-A
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57829

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.011	ug/L		03/17/20 14:08	03/18/20 17:31	1
2-Methylnaphthalene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 17:31	1
Acenaphthylene	ND		0.20	0.011	ug/L		03/17/20 14:08	03/18/20 17:31	1
Acenaphthene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 17:31	1
Anthracene	ND		0.20	0.015	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[g,h,i]perylene	ND		0.20	0.021	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[k]fluoranthene	ND		0.20	0.011	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[a]anthracene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[a]pyrene	ND		0.20	0.019	ug/L		03/17/20 14:08	03/18/20 17:31	1
Benzo[b]fluoranthene	ND		0.20	0.023	ug/L		03/17/20 14:08	03/18/20 17:31	1
Chrysene	ND		0.20	0.023	ug/L		03/17/20 14:08	03/18/20 17:31	1
Dibenz(a,h)anthracene	ND		0.20	0.018	ug/L		03/17/20 14:08	03/18/20 17:31	1
Fluoranthene	ND		0.20	0.015	ug/L		03/17/20 14:08	03/18/20 17:31	1
Fluorene	ND		0.20	0.013	ug/L		03/17/20 14:08	03/18/20 17:31	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.022	ug/L		03/17/20 14:08	03/18/20 17:31	1
Naphthalene	ND		0.20	0.014	ug/L		03/17/20 14:08	03/18/20 17:31	1
Phenanthrene	ND		0.20	0.0051	ug/L		03/17/20 14:08	03/18/20 17:31	1
Pyrene	ND		0.20	0.012	ug/L		03/17/20 14:08	03/18/20 17:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*120*		*33 - 144*	*03/17/20 14:08*	*03/18/20 17:31*	*1*
Nitrobenzene-d5 (Surr)	*97*		*28 - 139*	*03/17/20 14:08*	*03/18/20 17:31*	*1*
p-Terphenyl-d14 (Surr)	*106*		*23 - 160*	*03/17/20 14:08*	*03/18/20 17:31*	*1*

Lab Sample ID: LCS 570-57829/2-A
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57829

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	2.00	2.33		ug/L		116	20 - 140
2-Methylnaphthalene	2.00	2.13		ug/L		106	21 - 140
Acenaphthylene	2.00	2.38		ug/L		119	33 - 145
Acenaphthene	2.00	2.15		ug/L		107	55 - 121
Anthracene	2.00	2.16		ug/L		108	27 - 133
Benzo[g,h,i]perylene	2.00	2.38		ug/L		119	25 - 157
Benzo[k]fluoranthene	2.00	2.44		ug/L		122	24 - 159
Benzo[a]anthracene	2.00	2.14		ug/L		107	33 - 143
Benzo[a]pyrene	2.00	2.13		ug/L		106	17 - 163
Benzo[b]fluoranthene	2.00	2.32		ug/L		116	24 - 159
Chrysene	2.00	2.07		ug/L		103	17 - 168
Dibenz(a,h)anthracene	2.00	2.29		ug/L		115	25 - 175
Fluoranthene	2.00	2.28		ug/L		114	26 - 137
Fluorene	2.00	2.34		ug/L		117	59 - 121
Indeno[1,2,3-cd]pyrene	2.00	2.29		ug/L		114	25 - 175
Naphthalene	2.00	2.08		ug/L		104	21 - 133
Phenanthrene	2.00	2.13		ug/L		106	54 - 120
Pyrene	2.00	2.10		ug/L		105	45 - 129

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: LCS 570-57829/2-A
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57829

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	112		33 - 144
Nitrobenzene-d5 (Surr)	101		28 - 139
p-Terphenyl-d14 (Surr)	99		23 - 160

Lab Sample ID: LCSD 570-57829/3-A
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57829

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene			2.00	2.30		ug/L		115	20 - 140	1	25
2-Methylnaphthalene			2.00	2.15		ug/L		107	21 - 140	1	25
Acenaphthylene			2.00	2.17		ug/L		109	33 - 145	9	25
Acenaphthene			2.00	2.15		ug/L		107	55 - 121	0	25
Anthracene			2.00	2.12		ug/L		106	27 - 133	2	25
Benzo[g,h,i]perylene			2.00	2.31		ug/L		115	25 - 157	3	25
Benzo[k]fluoranthene			2.00	2.35		ug/L		118	24 - 159	4	25
Benzo[a]anthracene			2.00	2.15		ug/L		107	33 - 143	0	25
Benzo[a]pyrene			2.00	2.03		ug/L		101	17 - 163	5	25
Benzo[b]fluoranthene			2.00	2.18		ug/L		109	24 - 159	7	25
Chrysene			2.00	2.06		ug/L		103	17 - 168	0	25
Dibenz(a,h)anthracene			2.00	2.28		ug/L		114	25 - 175	0	25
Fluoranthene			2.00	2.11		ug/L		105	26 - 137	8	25
Fluorene			2.00	2.28		ug/L		114	59 - 121	2	25
Indeno[1,2,3-cd]pyrene			2.00	2.23		ug/L		112	25 - 175	2	25
Naphthalene			2.00	2.16		ug/L		108	21 - 133	4	25
Phenanthrene			2.00	2.18		ug/L		109	54 - 120	3	25
Pyrene			2.00	2.11		ug/L		105	45 - 129	0	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	107		33 - 144
Nitrobenzene-d5 (Surr)	109		28 - 139
p-Terphenyl-d14 (Surr)	97		23 - 160

Lab Sample ID: 440-262952-E-4-B MS
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57829

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	ND		2.00	1.46		ug/L		73	20 - 140
2-Methylnaphthalene	ND		2.00	1.39		ug/L		69	21 - 140
Acenaphthylene	ND		2.00	1.55		ug/L		78	33 - 145
Acenaphthene	ND		2.00	1.45		ug/L		72	49 - 121
Anthracene	ND		2.00	1.91		ug/L		96	27 - 133
Benzo[g,h,i]perylene	ND		2.00	2.33		ug/L		117	10 - 227
Benzo[k]fluoranthene	ND		2.00	2.13		ug/L		106	24 - 159
Benzo[a]anthracene	ND		2.00	2.05		ug/L		102	33 - 143
Benzo[a]pyrene	ND		2.00	1.98		ug/L		99	17 - 163
Benzo[b]fluoranthene	ND		2.00	2.23		ug/L		111	24 - 159

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: 440-262952-E-4-B MS
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57829

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	ND		2.00	1.97		ug/L		98	17 - 168
Dibenz(a,h)anthracene	ND		2.00	2.36		ug/L		118	10 - 219
Fluoranthene	0.014	J	2.00	2.18		ug/L		108	26 - 137
Fluorene	ND		2.00	1.70		ug/L		85	59 - 121
Indeno[1,2,3-cd]pyrene	ND		2.00	2.25		ug/L		113	10 - 171
Naphthalene	0.015	J	2.00	1.30		ug/L		64	21 - 133
Phenanthrene	0.014	J	2.00	1.79		ug/L		89	54 - 120
Pyrene	0.015	J	2.00	1.86		ug/L		92	18 - 168

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*71*		*33 - 144*
Nitrobenzene-d5 (Surr)	*58*		*28 - 139*
p-Terphenyl-d14 (Surr)	*84*		*23 - 160*

Lab Sample ID: 440-262952-E-4-C MSD
Matrix: Water
Analysis Batch: 58000

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57829

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	ND		2.00	1.39		ug/L		70	20 - 140	5	25
2-Methylnaphthalene	ND		2.00	1.33		ug/L		66	21 - 140	5	25
Acenaphthylene	ND		2.00	1.54		ug/L		77	33 - 145	1	25
Acenaphthene	ND		2.00	1.39		ug/L		70	49 - 121	4	25
Anthracene	ND		2.00	1.79		ug/L		90	27 - 133	6	25
Benzo[g,h,i]perylene	ND		2.00	1.93		ug/L		96	10 - 227	19	25
Benzo[k]fluoranthene	ND		2.00	1.96		ug/L		98	24 - 159	8	25
Benzo[a]anthracene	ND		2.00	1.83		ug/L		91	33 - 143	11	25
Benzo[a]pyrene	ND		2.00	1.84		ug/L		92	17 - 163	8	25
Benzo[b]fluoranthene	ND		2.00	2.01		ug/L		101	24 - 159	10	25
Chrysene	ND		2.00	1.73		ug/L		87	17 - 168	13	25
Dibenz(a,h)anthracene	ND		2.00	1.98		ug/L		99	10 - 219	18	25
Fluoranthene	0.014	J	2.00	1.96		ug/L		97	26 - 137	11	25
Fluorene	ND		2.00	1.65		ug/L		83	59 - 121	3	25
Indeno[1,2,3-cd]pyrene	ND		2.00	1.91		ug/L		96	10 - 171	16	25
Naphthalene	0.015	J	2.00	1.22		ug/L		60	21 - 133	6	25
Phenanthrene	0.014	J	2.00	1.66		ug/L		82	54 - 120	8	25
Pyrene	0.015	J	2.00	1.72		ug/L		85	18 - 168	8	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*70*		*33 - 144*
Nitrobenzene-d5 (Surr)	*55*		*28 - 139*
p-Terphenyl-d14 (Surr)	*77*		*23 - 160*

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: MB 570-57878/1-A
Matrix: Solid
Analysis Batch: 58000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57878

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		20	1.4	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
2-Methylnaphthalene	ND		20	1.4	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Acenaphthene	ND		20	1.0	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Anthracene	ND		20	1.3	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Benzo[a]anthracene	ND		20	2.2	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Benzo[a]pyrene	ND		20	2.7	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Chrysene	ND		20	1.6	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Dibenz(a,h)anthracene	ND		20	2.1	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Fluoranthene	ND		20	1.9	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Fluorene	ND		20	1.7	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Naphthalene	ND		20	1.6	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Phenanthrene	ND		20	1.7	ug/Kg		03/17/20 17:05	03/18/20 18:10	1
Pyrene	ND		20	1.5	ug/Kg		03/17/20 17:05	03/18/20 18:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*93*		*22 - 130*	*03/17/20 17:05*	*03/18/20 18:10*	*1*
Nitrobenzene-d5 (Surr)	*69*		*20 - 145*	*03/17/20 17:05*	*03/18/20 18:10*	*1*
p-Terphenyl-d14 (Surr)	*88*		*33 - 147*	*03/17/20 17:05*	*03/18/20 18:10*	*1*

Lab Sample ID: LCS 570-57878/2-A
Matrix: Solid
Analysis Batch: 58298

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57878

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	200	207		ug/Kg		103	54 - 132
2-Methylnaphthalene	200	197		ug/Kg		99	50 - 127
Acenaphthene	200	205		ug/Kg		103	53 - 125
Anthracene	200	221		ug/Kg		110	50 - 132
Benzo[a]anthracene	200	215		ug/Kg		107	50 - 133
Benzo[a]pyrene	200	197		ug/Kg		98	50 - 134
Chrysene	200	194		ug/Kg		97	51 - 129
Dibenz(a,h)anthracene	200	238		ug/Kg		119	50 - 133
Fluoranthene	200	225		ug/Kg		112	55 - 127
Fluorene	200	228		ug/Kg		114	55 - 127
Naphthalene	200	200		ug/Kg		100	51 - 129
Phenanthrene	200	201		ug/Kg		101	50 - 122
Pyrene	200	200		ug/Kg		100	50 - 134

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*95*		*22 - 130*
Nitrobenzene-d5 (Surr)	*89*		*20 - 145*
p-Terphenyl-d14 (Surr)	*93*		*33 - 147*

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 570-57878/3-A
Matrix: Solid
Analysis Batch: 58000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57878

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene			200	209		ug/Kg		104	54 - 132	1	20
2-Methylnaphthalene			200	210		ug/Kg		105	50 - 127	6	20
Acenaphthene			200	203		ug/Kg		102	53 - 125	1	20
Anthracene			200	209		ug/Kg		104	50 - 132	6	20
Benzo[a]anthracene			200	206		ug/Kg		103	50 - 133	4	20
Benzo[a]pyrene			200	198		ug/Kg		99	50 - 134	1	20
Chrysene			200	193		ug/Kg		97	51 - 129	1	20
Dibenz(a,h)anthracene			200	204		ug/Kg		102	50 - 133	15	20
Fluoranthene			200	212		ug/Kg		106	55 - 127	6	20
Fluorene			200	222		ug/Kg		111	55 - 127	3	20
Naphthalene			200	198		ug/Kg		99	51 - 129	1	20
Phenanthrene			200	203		ug/Kg		101	50 - 122	1	20
Pyrene			200	187		ug/Kg		94	50 - 134	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*99*		*22 - 130*
Nitrobenzene-d5 (Surr)	*84*		*20 - 145*
p-Terphenyl-d14 (Surr)	*85*		*33 - 147*

Lab Sample ID: 440-262954-4 MS
Matrix: Solid
Analysis Batch: 58000

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57878

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	ND		201	187		ug/Kg		93	34 - 136
2-Methylnaphthalene	ND		201	182		ug/Kg		91	29 - 137
Acenaphthene	ND		201	182		ug/Kg		91	29 - 137
Anthracene	ND		201	188		ug/Kg		93	26 - 134
Benzo[a]anthracene	12	J	201	202		ug/Kg		94	24 - 150
Benzo[a]pyrene	19	J	201	209		ug/Kg		95	29 - 149
Chrysene	19	J	201	179		ug/Kg		80	25 - 145
Dibenz(a,h)anthracene	7.8	J *1	201	228		ug/Kg		110	20 - 132
Fluoranthene	17	J F2	201	218		ug/Kg		100	20 - 151
Fluorene	ND		201	189		ug/Kg		94	36 - 132
Naphthalene	1.6	J	201	177		ug/Kg		88	20 - 150
Phenanthrene	3.6	J	201	179		ug/Kg		87	20 - 144
Pyrene	17	J	201	184		ug/Kg		83	20 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*86*		*22 - 130*
Nitrobenzene-d5 (Surr)	*81*		*20 - 145*
p-Terphenyl-d14 (Surr)	*80*		*33 - 147*

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: 440-262954-4 MSD
Matrix: Solid
Analysis Batch: 58000

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57878

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	ND		202	162		ug/Kg		81	34 - 136	14	29
2-Methylnaphthalene	ND		202	159		ug/Kg		79	29 - 137	14	31
Acenaphthene	ND		202	161		ug/Kg		80	29 - 137	12	28
Anthracene	ND		202	165		ug/Kg		82	26 - 134	13	27
Benzo[a]anthracene	12	J	202	172		ug/Kg		79	24 - 150	16	24
Benzo[a]pyrene	19	J	202	171		ug/Kg		76	29 - 149	20	22
Chrysene	19	J	202	163		ug/Kg		71	25 - 145	10	28
Dibenz(a,h)anthracene	7.8	J *1	202	182		ug/Kg		87	20 - 132	22	26
Fluoranthene	17	J F2	202	166	F7	ug/Kg		74	20 - 151	27	26
Fluorene	ND		202	168		ug/Kg		83	36 - 132	12	27
Naphthalene	1.6	J	202	159		ug/Kg		78	20 - 150	11	33
Phenanthrene	3.6	J	202	157		ug/Kg		76	20 - 144	13	27
Pyrene	17	J	202	137		ug/Kg		59	20 - 150	30	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*70*		*22 - 130*
Nitrobenzene-d5 (Surr)	*75*		*20 - 145*
p-Terphenyl-d14 (Surr)	*61*		*33 - 147*

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Lab Sample ID: MB 570-57895/1-A
Matrix: Solid
Analysis Batch: 58315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57895

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.40	0.077	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-18	ND		0.20	0.065	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-28	ND		0.20	0.069	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-44	ND		0.20	0.15	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-52	ND		0.20	0.19	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-66	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-101	ND		0.20	0.044	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-105	ND		0.20	0.053	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-118	ND		0.20	0.035	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-128	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-132/153	ND		0.40	0.16	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-138/158	ND		0.40	0.35	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-170	ND		0.20	0.11	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-180	ND		0.20	0.092	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-187	ND		0.20	0.10	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-195	ND		0.20	0.060	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
PCB-206	ND		0.20	0.12	ug/Kg		03/17/20 17:50	03/19/20 13:36	1
Decachlorobiphenyl	ND		0.20	0.061	ug/Kg		03/17/20 17:50	03/19/20 13:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*78*		*14 - 146*	*03/17/20 17:50*	*03/19/20 13:36*	*1*
p-Terphenyl-d14 (Surr)	*102*		*34 - 148*	*03/17/20 17:50*	*03/19/20 13:36*	*1*

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Lab Sample ID: LCS 570-57895/2-A
Matrix: Solid
Analysis Batch: 58315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57895

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-5/8			50.0	48.6		ug/Kg		97	50 - 150		
PCB-18			50.0	38.1		ug/Kg		76	24 - 132		
PCB-28			50.0	44.2		ug/Kg		88	31 - 133		
PCB-44			50.0	43.1		ug/Kg		86	36 - 120		
PCB-52			50.0	45.0		ug/Kg		90	31 - 121		
PCB-66			50.0	45.5		ug/Kg		91	43 - 139		
PCB-101			50.0	43.9		ug/Kg		88	37 - 121		
PCB-105			50.0	43.3		ug/Kg		87	48 - 132		
PCB-118			50.0	41.4		ug/Kg		83	46 - 136		
PCB-128			50.0	45.8		ug/Kg		92	40 - 130		
PCB-132/153			50.0	56.9		ug/Kg		114	50 - 150		
PCB-138/158			50.0	39.3		ug/Kg		79	50 - 150		
PCB-170			50.0	43.3		ug/Kg		87	40 - 124		
PCB-180			50.0	49.2		ug/Kg		98	41 - 143		
PCB-187			50.0	47.3		ug/Kg		95	39 - 129		
PCB-195			50.0	46.9		ug/Kg		94	44 - 128		
PCB-206			50.0	52.1		ug/Kg		104	33 - 135		
Decachlorobiphenyl			50.0	54.7		ug/Kg		109	29 - 137		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*75*		*14 - 146*
p-Terphenyl-d14 (Surr)	*99*		*34 - 148*

Lab Sample ID: LCSD 570-57895/3-A
Matrix: Solid
Analysis Batch: 58315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57895

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8			50.0	51.0		ug/Kg		102	50 - 150	5	25
PCB-18			50.0	39.3		ug/Kg		79	24 - 132	3	28
PCB-28			50.0	45.1		ug/Kg		90	31 - 133	2	26
PCB-44			50.0	44.2		ug/Kg		88	36 - 120	2	28
PCB-52			50.0	45.9		ug/Kg		92	31 - 121	2	27
PCB-66			50.0	46.7		ug/Kg		93	43 - 139	3	25
PCB-101			50.0	46.0		ug/Kg		92	37 - 121	5	27
PCB-105			50.0	45.0		ug/Kg		90	48 - 132	4	26
PCB-118			50.0	42.6		ug/Kg		85	46 - 136	3	25
PCB-128			50.0	49.9		ug/Kg		100	40 - 130	9	26
PCB-132/153			50.0	58.9		ug/Kg		118	50 - 150	3	25
PCB-138/158			50.0	41.7		ug/Kg		83	50 - 150	6	25
PCB-170			50.0	44.6		ug/Kg		89	40 - 124	3	29
PCB-180			50.0	52.5		ug/Kg		105	41 - 143	7	26
PCB-187			50.0	50.9		ug/Kg		102	39 - 129	7	26
PCB-195			50.0	47.9		ug/Kg		96	44 - 128	2	28
PCB-206			50.0	54.2		ug/Kg		108	33 - 135	4	24
Decachlorobiphenyl			50.0	55.1		ug/Kg		110	29 - 137	1	29

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: LCSD 570-57895/3-A
Matrix: Solid
Analysis Batch: 58315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57895

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	71		14 - 146
p-Terphenyl-d14 (Surr)	98		34 - 148

Lab Sample ID: 440-262954-4 MS
Matrix: Solid
Analysis Batch: 58315

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57895

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-5/8	ND		50.0	47.8		ug/Kg		96	50 - 150
PCB-18	ND		50.0	38.1		ug/Kg		76	24 - 132
PCB-28	ND		50.0	45.9		ug/Kg		92	31 - 133
PCB-44	ND		50.0	44.1		ug/Kg		88	36 - 120
PCB-52	ND		50.0	47.2		ug/Kg		94	31 - 121
PCB-66	ND		50.0	44.4		ug/Kg		89	43 - 139
PCB-101	ND		50.0	43.3		ug/Kg		87	37 - 121
PCB-105	ND		50.0	41.2		ug/Kg		82	48 - 132
PCB-118	ND		50.0	40.0		ug/Kg		80	46 - 136
PCB-128	ND		50.0	46.9		ug/Kg		94	40 - 130
PCB-132/153	ND		50.0	54.5		ug/Kg		109	50 - 150
PCB-138/158	ND		50.0	38.5		ug/Kg		77	50 - 150
PCB-170	ND		50.0	45.1		ug/Kg		90	40 - 124
PCB-180	ND		50.0	48.4		ug/Kg		97	41 - 143
PCB-187	ND		50.0	47.7		ug/Kg		95	39 - 129
PCB-195	ND		50.0	47.5		ug/Kg		95	44 - 128
PCB-206	ND		50.0	55.6		ug/Kg		111	33 - 135
Decachlorobiphenyl	ND		50.0	60.4		ug/Kg		121	29 - 137

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	76		14 - 146
p-Terphenyl-d14 (Surr)	98		34 - 148

Lab Sample ID: 440-262954-4 MSD
Matrix: Solid
Analysis Batch: 58315

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57895

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8	ND		50.0	47.4		ug/Kg		95	50 - 150	1	25
PCB-18	ND		50.0	37.9		ug/Kg		76	24 - 132	0	28
PCB-28	ND		50.0	45.7		ug/Kg		91	31 - 133	0	26
PCB-44	ND		50.0	43.0		ug/Kg		86	36 - 120	3	28
PCB-52	ND		50.0	45.3		ug/Kg		91	31 - 121	4	27
PCB-66	ND		50.0	42.5		ug/Kg		85	43 - 139	4	25
PCB-101	ND		50.0	42.4		ug/Kg		85	37 - 121	2	27
PCB-105	ND		50.0	40.5		ug/Kg		81	48 - 132	2	26
PCB-118	ND		50.0	39.1		ug/Kg		78	46 - 136	2	25
PCB-128	ND		50.0	46.4		ug/Kg		93	40 - 130	1	26
PCB-132/153	ND		50.0	51.9		ug/Kg		104	50 - 150	5	25
PCB-138/158	ND		50.0	38.0		ug/Kg		76	50 - 150	1	25

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: 440-262954-4 MSD
Matrix: Solid
Analysis Batch: 58315

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 57895

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-170	ND		50.0	45.3		ug/Kg		91	40 - 124	0	29
PCB-180	ND		50.0	47.9		ug/Kg		96	41 - 143	1	26
PCB-187	ND		50.0	46.1		ug/Kg		92	39 - 129	3	26
PCB-195	ND		50.0	47.6		ug/Kg		95	44 - 128	0	28
PCB-206	ND		50.0	55.6		ug/Kg		111	33 - 135	0	24
Decachlorobiphenyl	ND		50.0	59.8		ug/Kg		120	29 - 137	1	29

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*65*		*14 - 146*
p-Terphenyl-d14 (Surr)	*96*		*34 - 148*

Lab Sample ID: MB 570-57938/1-A
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57938

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0040	0.00051	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-18	ND		0.0020	0.00046	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-28	ND		0.0020	0.00053	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-44	ND		0.0020	0.00071	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-52	ND		0.0020	0.00056	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-66	ND		0.0020	0.00040	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-101	ND		0.0020	0.00050	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-105	ND		0.0020	0.00047	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-118	ND		0.0020	0.00050	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-128	ND		0.0020	0.00043	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-132/153	ND		0.0040	0.00069	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-138/158	ND		0.0040	0.00060	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-170	ND		0.0020	0.00042	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-180	ND		0.0020	0.00060	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-187	ND		0.0020	0.00043	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-195	ND		0.0020	0.00075	ug/L		03/18/20 06:55	03/19/20 12:23	1
PCB-206	ND		0.0020	0.00043	ug/L		03/18/20 06:55	03/19/20 12:23	1
Decachlorobiphenyl	ND		0.0020	0.0013	ug/L		03/18/20 06:55	03/19/20 12:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*50 - 150*	*03/18/20 06:55*	*03/19/20 12:23*	*1*
p-Terphenyl-d14 (Surr)	*103*		*50 - 150*	*03/18/20 06:55*	*03/19/20 12:23*	*1*

Lab Sample ID: LCS 570-57938/2-A
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57938

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-5/8	0.500	0.414		ug/L		83	50 - 150
PCB-18	0.500	0.335		ug/L		67	50 - 150
PCB-28	0.500	0.385		ug/L		77	50 - 150
PCB-44	0.500	0.399		ug/L		80	50 - 150

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: LCS 570-57938/2-A
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57938

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-52			0.500	0.406		ug/L		81	50 - 150		
PCB-66			0.500	0.427		ug/L		85	50 - 150		
PCB-101			0.500	0.419		ug/L		84	50 - 150		
PCB-105			0.500	0.385		ug/L		77	50 - 150		
PCB-118			0.500	0.372		ug/L		74	50 - 150		
PCB-128			0.500	0.432		ug/L		86	50 - 150		
PCB-132/153			0.500	0.509		ug/L		102	50 - 150		
PCB-138/158			0.500	0.354		ug/L		71	50 - 150		
PCB-170			0.500	0.395		ug/L		79	50 - 150		
PCB-180			0.500	0.446		ug/L		89	50 - 150		
PCB-187			0.500	0.441		ug/L		88	50 - 150		
PCB-195			0.500	0.425		ug/L		85	50 - 150		
PCB-206			0.500	0.463		ug/L		93	50 - 150		
Decachlorobiphenyl			0.500	0.494		ug/L		99	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*80*		*50 - 150*
p-Terphenyl-d14 (Surr)	*95*		*50 - 150*

Lab Sample ID: LCSD 570-57938/3-A
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57938

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8			0.500	0.423		ug/L		85	50 - 150	2	25
PCB-18			0.500	0.331		ug/L		66	50 - 150	1	25
PCB-28			0.500	0.377		ug/L		75	50 - 150	2	25
PCB-44			0.500	0.375		ug/L		75	50 - 150	6	25
PCB-52			0.500	0.384		ug/L		77	50 - 150	5	25
PCB-66			0.500	0.383		ug/L		77	50 - 150	11	25
PCB-101			0.500	0.372		ug/L		74	50 - 150	12	25
PCB-105			0.500	0.358		ug/L		72	50 - 150	8	25
PCB-118			0.500	0.337		ug/L		67	50 - 150	10	25
PCB-128			0.500	0.395		ug/L		79	50 - 150	9	25
PCB-132/153			0.500	0.469		ug/L		94	50 - 150	8	25
PCB-138/158			0.500	0.328		ug/L		66	50 - 150	8	25
PCB-170			0.500	0.352		ug/L		70	50 - 150	12	25
PCB-180			0.500	0.398		ug/L		80	50 - 150	12	25
PCB-187			0.500	0.400		ug/L		80	50 - 150	10	25
PCB-195			0.500	0.374		ug/L		75	50 - 150	13	25
PCB-206			0.500	0.377		ug/L		75	50 - 150	21	25
Decachlorobiphenyl			0.500	0.426		ug/L		85	50 - 150	15	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*79*		*50 - 150*
p-Terphenyl-d14 (Surr)	*88*		*50 - 150*

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: 440-262952-C-4-B MS
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57938

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-5/8	ND		0.477	0.471		ug/L		99	50 - 150
PCB-18	ND		0.477	0.367		ug/L		77	50 - 150
PCB-28	ND		0.477	0.444		ug/L		93	50 - 150
PCB-44	ND		0.477	0.417		ug/L		87	50 - 150
PCB-52	ND		0.477	0.438		ug/L		92	50 - 150
PCB-66	ND		0.477	0.433		ug/L		91	50 - 150
PCB-101	ND		0.477	0.416		ug/L		87	50 - 150
PCB-105	ND		0.477	0.384		ug/L		81	50 - 150
PCB-118	ND		0.477	0.383		ug/L		80	50 - 150
PCB-128	ND		0.477	0.459		ug/L		96	50 - 150
PCB-132/153	ND		0.477	0.524		ug/L		110	50 - 150
PCB-138/158	ND		0.477	0.376		ug/L		79	50 - 150
PCB-170	ND		0.477	0.427		ug/L		89	50 - 150
PCB-180	ND		0.477	0.468		ug/L		98	50 - 150
PCB-187	ND		0.477	0.463		ug/L		97	50 - 150
PCB-195	ND		0.477	0.453		ug/L		95	50 - 150
PCB-206	ND		0.477	0.530		ug/L		111	50 - 150
Decachlorobiphenyl	ND		0.477	0.574		ug/L		120	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*84*		*50 - 150*
p-Terphenyl-d14 (Surr)	*97*		*50 - 150*

Lab Sample ID: 440-262952-C-4-C MSD
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57938

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8	ND		0.480	0.488		ug/L		102	50 - 150	3	25
PCB-18	ND		0.480	0.376		ug/L		78	50 - 150	2	25
PCB-28	ND		0.480	0.461		ug/L		96	50 - 150	4	25
PCB-44	ND		0.480	0.444		ug/L		93	50 - 150	6	25
PCB-52	ND		0.480	0.466		ug/L		97	50 - 150	6	25
PCB-66	ND		0.480	0.454		ug/L		95	50 - 150	5	25
PCB-101	ND		0.480	0.439		ug/L		92	50 - 150	5	25
PCB-105	ND		0.480	0.415		ug/L		86	50 - 150	8	25
PCB-118	ND		0.480	0.402		ug/L		84	50 - 150	5	25
PCB-128	ND		0.480	0.466		ug/L		97	50 - 150	2	25
PCB-132/153	ND		0.480	0.555		ug/L		116	50 - 150	6	25
PCB-138/158	ND		0.480	0.383		ug/L		80	50 - 150	2	25
PCB-170	ND		0.480	0.420		ug/L		88	50 - 150	2	25
PCB-180	ND		0.480	0.477		ug/L		100	50 - 150	2	25
PCB-187	ND		0.480	0.478		ug/L		100	50 - 150	3	25
PCB-195	ND		0.480	0.444		ug/L		93	50 - 150	2	25
PCB-206	ND		0.480	0.506		ug/L		106	50 - 150	5	25
Decachlorobiphenyl	ND		0.480	0.552		ug/L		115	50 - 150	4	25

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: 440-262952-C-4-C MSD
Matrix: Water
Analysis Batch: 58315

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57938

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	87		50 - 150
p-Terphenyl-d14 (Surr)	101		50 - 150

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 440-600622/1-A
Matrix: Water
Analysis Batch: 600738

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 600622

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.0050	0.0040	ug/L		03/16/20 06:00	03/16/20 17:09	1
4,4'-DDE	ND		0.0050	0.0030	ug/L		03/16/20 06:00	03/16/20 17:09	1
4,4'-DDT	ND		0.010	0.0040	ug/L		03/16/20 06:00	03/16/20 17:09	1
Aldrin	ND		0.0050	0.0015	ug/L		03/16/20 06:00	03/16/20 17:09	1
alpha-BHC	ND		0.0050	0.0025	ug/L		03/16/20 06:00	03/16/20 17:09	1
beta-BHC	ND		0.010	0.0040	ug/L		03/16/20 06:00	03/16/20 17:09	1
Chlordane (technical)	ND		0.10	0.080	ug/L		03/16/20 06:00	03/16/20 17:09	1
delta-BHC	ND		0.0050	0.0035	ug/L		03/16/20 06:00	03/16/20 17:09	1
Dieldrin	ND		0.0050	0.0020	ug/L		03/16/20 06:00	03/16/20 17:09	1
Endosulfan I	ND		0.0050	0.0030	ug/L		03/16/20 06:00	03/16/20 17:09	1
Endosulfan II	ND		0.0050	0.0020	ug/L		03/16/20 06:00	03/16/20 17:09	1
Endosulfan sulfate	ND		0.010	0.0030	ug/L		03/16/20 06:00	03/16/20 17:09	1
Endrin	ND		0.0050	0.0020	ug/L		03/16/20 06:00	03/16/20 17:09	1
Endrin aldehyde	ND		0.010	0.0020	ug/L		03/16/20 06:00	03/16/20 17:09	1
Endrin ketone	ND		0.010	0.0070	ug/L		03/16/20 06:00	03/16/20 17:09	1
gamma-BHC (Lindane)	ND		0.010	0.0030	ug/L		03/16/20 06:00	03/16/20 17:09	1
trans-Chlordane	ND		0.10	0.030	ug/L		03/16/20 06:00	03/16/20 17:09	1
Heptachlor	ND		0.010	0.0030	ug/L		03/16/20 06:00	03/16/20 17:09	1
Heptachlor epoxide	ND		0.0050	0.0025	ug/L		03/16/20 06:00	03/16/20 17:09	1
Methoxychlor	ND		0.0050	0.0035	ug/L		03/16/20 06:00	03/16/20 17:09	1
Toxaphene	ND		0.50	0.25	ug/L		03/16/20 06:00	03/16/20 17:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	61		10 - 123	03/16/20 06:00	03/16/20 17:09	1
DCB Decachlorobiphenyl (Surr)	79		28 - 108	03/16/20 06:00	03/16/20 17:09	1

Lab Sample ID: LCS 440-600622/2-A
Matrix: Water
Analysis Batch: 600738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 600622

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.400	0.355		ug/L		89	50 - 128
4,4'-DDE	0.400	0.343		ug/L		86	49 - 121
4,4'-DDT	0.400	0.355		ug/L		89	41 - 140
Aldrin	0.400	0.296		ug/L		74	37 - 115
alpha-BHC	0.400	0.332		ug/L		83	44 - 115
beta-BHC	0.400	0.344		ug/L		86	46 - 121
delta-BHC	0.400	0.345		ug/L		86	32 - 129

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 440-600622/2-A
Matrix: Water
Analysis Batch: 600738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 600622

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dieldrin	0.400	0.352		ug/L		88	39 - 126
Endosulfan I	0.400	0.341		ug/L		85	47 - 115
Endosulfan II	0.400	0.363		ug/L		91	47 - 120
Endosulfan sulfate	0.400	0.361		ug/L		90	48 - 126
Endrin	0.400	0.357		ug/L		89	43 - 127
Endrin aldehyde	0.400	0.340		ug/L		85	43 - 120
Endrin ketone	0.400	0.343		ug/L		86	47 - 123
gamma-BHC (Lindane)	0.400	0.350		ug/L		88	45 - 116
trans-Chlordane	0.400	0.349		ug/L		87	37 - 129
Heptachlor	0.400	0.346		ug/L		86	37 - 115
Heptachlor epoxide	0.400	0.344		ug/L		86	41 - 129
Methoxychlor	0.400	0.376		ug/L		94	44 - 141

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*77*		*10 - 123*
DCB Decachlorobiphenyl (Surr)	*88*		*28 - 108*

Lab Sample ID: 440-262952-B-4-A MS
Matrix: Water
Analysis Batch: 600738

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 600622

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	ND		0.379	0.295		ug/L		78	50 - 125
4,4'-DDE	ND		0.379	0.277		ug/L		73	45 - 125
4,4'-DDT	ND		0.379	0.297		ug/L		78	50 - 125
Aldrin	ND		0.379	0.266		ug/L		70	35 - 120
alpha-BHC	ND		0.379	0.253		ug/L		67	40 - 120
beta-BHC	ND		0.379	0.266		ug/L		70	50 - 120
delta-BHC	ND		0.379	0.272		ug/L		72	50 - 120
Dieldrin	ND		0.379	0.291		ug/L		77	50 - 120
Endosulfan I	ND		0.379	0.281		ug/L		74	50 - 120
Endosulfan II	ND		0.379	0.295		ug/L		78	50 - 125
Endosulfan sulfate	ND		0.379	0.312		ug/L		82	55 - 125
Endrin	ND		0.379	0.307		ug/L		81	50 - 120
Endrin aldehyde	ND		0.379	0.264		ug/L		70	45 - 125
Endrin ketone	ND		0.379	0.302		ug/L		80	50 - 125
gamma-BHC (Lindane)	ND		0.379	0.287		ug/L		76	40 - 120
trans-Chlordane	ND		0.379	0.274		ug/L		72	50 - 115
Heptachlor	ND		0.379	0.290		ug/L		76	40 - 120
Heptachlor epoxide	ND		0.379	0.287		ug/L		76	50 - 120
Methoxychlor	ND		0.379	0.339		ug/L		89	55 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*56*		*10 - 123*
DCB Decachlorobiphenyl (Surr)	*71*		*28 - 108*

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 440-262952-B-4-B MSD
Matrix: Water
Analysis Batch: 600738

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 600622

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		0.377	0.308		ug/L		82	50 - 125	5	30
4,4'-DDE	ND		0.377	0.288		ug/L		76	45 - 125	4	30
4,4'-DDT	ND		0.377	0.313		ug/L		83	50 - 125	5	30
Aldrin	ND		0.377	0.275		ug/L		73	35 - 120	4	30
alpha-BHC	ND		0.377	0.261		ug/L		69	40 - 120	3	30
beta-BHC	ND		0.377	0.277		ug/L		73	50 - 120	4	30
delta-BHC	ND		0.377	0.284		ug/L		75	50 - 120	4	30
Dieldrin	ND		0.377	0.304		ug/L		81	50 - 120	4	30
Endosulfan I	ND		0.377	0.294		ug/L		78	50 - 120	4	30
Endosulfan II	ND		0.377	0.310		ug/L		82	50 - 125	5	30
Endosulfan sulfate	ND		0.377	0.330		ug/L		87	55 - 125	6	30
Endrin	ND		0.377	0.321		ug/L		85	50 - 120	4	30
Endrin aldehyde	ND		0.377	0.272		ug/L		72	45 - 125	3	30
Endrin ketone	ND		0.377	0.315		ug/L		83	50 - 125	4	30
gamma-BHC (Lindane)	ND		0.377	0.298		ug/L		79	40 - 120	4	30
trans-Chlordane	ND		0.377	0.286		ug/L		76	50 - 115	4	30
Heptachlor	ND		0.377	0.302		ug/L		80	40 - 120	4	30
Heptachlor epoxide	ND		0.377	0.295		ug/L		78	50 - 120	3	30
Methoxychlor	ND		0.377	0.349		ug/L		92	55 - 125	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*56*		*10 - 123*
DCB Decachlorobiphenyl (Surr)	*72*		*28 - 108*

Lab Sample ID: MB 440-601087/1-A
Matrix: Solid
Analysis Batch: 601158

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 601087

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
4,4'-DDE	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
4,4'-DDT	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Aldrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
alpha-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
beta-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Chlordane (technical)	ND		40	15	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
delta-BHC	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Dieldrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Endosulfan I	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Endosulfan II	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Endosulfan sulfate	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Endrin	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Endrin aldehyde	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Endrin ketone	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
gamma-BHC (Lindane)	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
trans-Chlordane	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Heptachlor	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Heptachlor epoxide	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 440-601087/1-A
Matrix: Solid
Analysis Batch: 601158

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 601087

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	ND		2.0	0.50	ug/Kg		03/18/20 05:37	03/18/20 15:37	1
Toxaphene	ND		40	20	ug/Kg		03/18/20 05:37	03/18/20 15:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*28 - 115*	*03/18/20 05:37*	*03/18/20 15:37*	*1*
DCB Decachlorobiphenyl (Surr)	*95*		*21 - 117*	*03/18/20 05:37*	*03/18/20 15:37*	*1*

Lab Sample ID: LCS 440-601087/2-A
Matrix: Solid
Analysis Batch: 601158

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 601087

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	26.7	20.6		ug/Kg		77	59 - 118
4,4'-DDE	26.7	19.7		ug/Kg		74	55 - 115
4,4'-DDT	26.7	20.5		ug/Kg		77	60 - 131
Aldrin	26.7	19.1		ug/Kg		72	53 - 115
alpha-BHC	26.7	19.0		ug/Kg		71	57 - 115
beta-BHC	26.7	19.5		ug/Kg		73	58 - 115
delta-BHC	26.7	19.6		ug/Kg		74	52 - 115
Dieldrin	26.7	20.2		ug/Kg		76	57 - 115
Endosulfan I	26.7	19.8		ug/Kg		74	56 - 115
Endosulfan II	26.7	21.7		ug/Kg		81	60 - 117
Endosulfan sulfate	26.7	21.2		ug/Kg		79	60 - 115
Endrin	26.7	20.9		ug/Kg		78	61 - 120
Endrin aldehyde	26.7	19.1		ug/Kg		72	54 - 115
Endrin ketone	26.7	19.8		ug/Kg		74	54 - 119
gamma-BHC (Lindane)	26.7	20.2		ug/Kg		76	56 - 115
trans-Chlordane	26.7	20.1		ug/Kg		75	38 - 150
Heptachlor	26.7	20.6		ug/Kg		77	52 - 115
Heptachlor epoxide	26.7	19.7		ug/Kg		74	59 - 115
Methoxychlor	26.7	22.1		ug/Kg		83	60 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*72*		*28 - 115*
DCB Decachlorobiphenyl (Surr)	*79*		*21 - 117*

Lab Sample ID: 440-262954-4 MS
Matrix: Solid
Analysis Batch: 601158

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 601087

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	ND		26.5	11.6		ug/Kg		44	10 - 150
4,4'-DDE	ND		26.5	12.1		ug/Kg		46	10 - 150
4,4'-DDT	ND		26.5	7.58		ug/Kg		29	13 - 141
Aldrin	ND		26.5	14.8		ug/Kg		56	10 - 150
alpha-BHC	ND		26.5	13.1		ug/Kg		49	12 - 125
beta-BHC	ND		26.5	9.80	p	ug/Kg		37	10 - 150
delta-BHC	ND		26.5	9.37		ug/Kg		35	12 - 130

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 440-262954-4 MS
Matrix: Solid
Analysis Batch: 601158

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 601087

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dieldrin	ND		26.5	12.8		ug/Kg		48	10 - 150
Endosulfan I	ND		26.5	11.1		ug/Kg		42	10 - 150
Endosulfan II	ND		26.5	8.61		ug/Kg		32	10 - 150
Endosulfan sulfate	ND		26.5	9.55		ug/Kg		36	10 - 150
Endrin	ND		26.5	12.6		ug/Kg		48	10 - 150
Endrin aldehyde	ND		26.5	7.36		ug/Kg		28	10 - 131
Endrin ketone	ND		26.5	8.52		ug/Kg		32	10 - 134
gamma-BHC (Lindane)	ND		26.5	12.7		ug/Kg		48	20 - 119
trans-Chlordane	ND		26.5	12.3		ug/Kg		46	10 - 150
Heptachlor	ND		26.5	13.7		ug/Kg		52	10 - 150
Heptachlor epoxide	ND		26.5	15.3		ug/Kg		58	10 - 150
Methoxychlor	ND		26.5	8.45		ug/Kg		32	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*68*		*28 - 115*
DCB Decachlorobiphenyl (Surr)	*42*		*21 - 117*

Lab Sample ID: 440-262954-4 MSD
Matrix: Solid
Analysis Batch: 601158

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 601087

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		26.7	11.3		ug/Kg		43	10 - 150	2	26
4,4'-DDE	ND		26.7	11.9		ug/Kg		45	10 - 150	1	40
4,4'-DDT	ND		26.7	7.19		ug/Kg		27	13 - 141	5	26
Aldrin	ND		26.7	13.3		ug/Kg		50	10 - 150	10	26
alpha-BHC	ND		26.7	12.7		ug/Kg		47	12 - 125	4	18
beta-BHC	ND		26.7	9.45	p	ug/Kg		35	10 - 150	4	33
delta-BHC	ND		26.7	8.32		ug/Kg		31	12 - 130	12	35
Dieldrin	ND		26.7	12.5		ug/Kg		47	10 - 150	3	28
Endosulfan I	ND		26.7	10.8		ug/Kg		40	10 - 150	3	32
Endosulfan II	ND		26.7	8.01		ug/Kg		30	10 - 150	7	25
Endosulfan sulfate	ND		26.7	8.93		ug/Kg		33	10 - 150	7	35
Endrin	ND		26.7	12.3		ug/Kg		46	10 - 150	2	27
Endrin aldehyde	ND		26.7	6.74		ug/Kg		25	10 - 131	9	33
Endrin ketone	ND		26.7	7.83		ug/Kg		29	10 - 134	8	40
gamma-BHC (Lindane)	ND		26.7	12.2		ug/Kg		46	20 - 119	4	24
trans-Chlordane	ND		26.7	12.3		ug/Kg		46	10 - 150	0	36
Heptachlor	ND		26.7	11.1		ug/Kg		42	10 - 150	21	28
Heptachlor epoxide	ND		26.7	14.9		ug/Kg		56	10 - 150	3	25
Methoxychlor	ND		26.7	7.77		ug/Kg		29	10 - 150	8	34

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*65*		*28 - 115*
DCB Decachlorobiphenyl (Surr)	*39*		*21 - 117*

Method: 200.8 LL - Metals (ICP/MS)

Lab Sample ID: MB 440-601392/1-A
Matrix: Water
Analysis Batch: 601500

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 601392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.10	0.050	ug/L		03/19/20 08:43	03/19/20 15:40	1
Copper	0.289	J	0.50	0.25	ug/L		03/19/20 08:43	03/19/20 15:40	1
Lead	ND		0.10	0.050	ug/L		03/19/20 08:43	03/19/20 15:40	1
Nickel	0.216		0.20	0.15	ug/L		03/19/20 08:43	03/19/20 15:40	1
Zinc	4.09	J	5.0	2.0	ug/L		03/19/20 08:43	03/19/20 15:40	1

Lab Sample ID: LCS 440-601392/2-A
Matrix: Water
Analysis Batch: 601500

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 601392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	80.0	84.1		ug/L		105	85 - 115
Aluminum	80.0	84.8		ug/L		106	85 - 115
Arsenic	80.0	80.0		ug/L		100	85 - 115
Barium	80.0	91.7		ug/L		115	85 - 115
Beryllium	80.0	85.8		ug/L		107	85 - 115
Cadmium	80.0	81.0		ug/L		101	85 - 115
Chromium	80.0	82.5		ug/L		103	85 - 115
Cobalt	80.0	82.5		ug/L		103	85 - 115
Copper	80.0	84.0		ug/L		105	85 - 115
Iron	800	842		ug/L		105	85 - 115
Lead	80.0	80.4		ug/L		100	85 - 115
Manganese	80.0	81.2		ug/L		102	85 - 115
Molybdenum	80.0	80.1		ug/L		100	85 - 115
Nickel	80.0	83.6		ug/L		105	85 - 115
Selenium	80.0	81.8		ug/L		102	85 - 115
Thallium	80.0	78.1		ug/L		98	85 - 115
Vanadium	80.0	81.9		ug/L		102	85 - 115
Zinc	80.0	82.7		ug/L		103	85 - 115

Lab Sample ID: LCSD 440-601392/3-A
Matrix: Water
Analysis Batch: 601500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 601392

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	80.0	83.1		ug/L		104	85 - 115	1	20
Aluminum	80.0	81.1		ug/L		101	85 - 115	4	20
Arsenic	80.0	79.4		ug/L		99	85 - 115	1	20
Barium	80.0	90.9		ug/L		114	85 - 115	1	20
Beryllium	80.0	83.4		ug/L		104	85 - 115	3	20
Cadmium	80.0	79.8		ug/L		100	85 - 115	2	20
Chromium	80.0	81.4		ug/L		102	85 - 115	1	20
Cobalt	80.0	81.9		ug/L		102	85 - 115	1	20
Copper	80.0	83.0		ug/L		104	85 - 115	1	20
Iron	800	825		ug/L		103	85 - 115	2	20
Lead	80.0	80.3		ug/L		100	85 - 115	0	20
Manganese	80.0	81.0		ug/L		101	85 - 115	0	20
Molybdenum	80.0	79.2		ug/L		99	85 - 115	1	20
Nickel	80.0	83.1		ug/L		104	85 - 115	1	20

Method: 200.8 LL - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 440-601392/3-A
Matrix: Water
Analysis Batch: 601500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 601392

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	80.0	80.0		ug/L		100	85 - 115	2	20
Thallium	80.0	78.1		ug/L		98	85 - 115	0	20
Vanadium	80.0	81.4		ug/L		102	85 - 115	1	20
Zinc	80.0	83.6		ug/L		104	85 - 115	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 440-600994/1-A ^20
Matrix: Solid
Analysis Batch: 601274

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 600994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.50	0.25	mg/Kg		03/18/20 08:30	03/18/20 15:14	20
Copper	ND		1.0	0.50	mg/Kg		03/18/20 08:30	03/18/20 15:14	20
Lead	ND		0.50	0.25	mg/Kg		03/18/20 08:30	03/18/20 15:14	20
Nickel	ND		1.0	0.50	mg/Kg		03/18/20 08:30	03/18/20 15:14	20
Zinc	ND		10	5.0	mg/Kg		03/18/20 08:30	03/18/20 15:14	20

Lab Sample ID: LCS 440-600994/2-A ^20
Matrix: Solid
Analysis Batch: 601274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 600994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	24.8	24.4		mg/Kg		98	80 - 120
Arsenic	49.5	48.2		mg/Kg		97	80 - 120
Barium	49.5	48.3		mg/Kg		97	80 - 120
Beryllium	49.5	49.8		mg/Kg		101	80 - 120
Cadmium	49.5	48.2		mg/Kg		97	80 - 120
Chromium	49.5	46.8		mg/Kg		95	80 - 120
Cobalt	49.5	47.0		mg/Kg		95	80 - 120
Copper	49.5	47.3		mg/Kg		96	80 - 120
Lead	49.5	48.0		mg/Kg		97	80 - 120
Molybdenum	49.5	47.7		mg/Kg		96	80 - 120
Nickel	49.5	47.3		mg/Kg		96	80 - 120
Selenium	49.5	46.4		mg/Kg		94	80 - 120
Thallium	49.5	47.3		mg/Kg		96	80 - 120
Vanadium	49.5	46.5		mg/Kg		94	80 - 120
Zinc	49.5	47.9		mg/Kg		97	80 - 120
Antimony	49.5	48.1		mg/Kg		97	80 - 120

Lab Sample ID: 440-262954-4 MS
Matrix: Solid
Analysis Batch: 601274

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 600994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		25.5	25.4		mg/Kg		100	75 - 125
Arsenic	0.93		51.0	50.7		mg/Kg		98	75 - 125
Barium	9.2		51.0	60.8		mg/Kg		101	75 - 125
Beryllium	ND		51.0	52.5		mg/Kg		103	75 - 125
Cadmium	ND		51.0	50.8		mg/Kg		99	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-262954-4 MS
Matrix: Solid
Analysis Batch: 601274

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 600994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	3.2		51.0	52.5		mg/Kg		97	75 - 125
Cobalt	1.3		51.0	50.1		mg/Kg		96	75 - 125
Copper	3.6		51.0	52.6		mg/Kg		96	75 - 125
Lead	3.3		51.0	53.3		mg/Kg		98	75 - 125
Molybdenum	ND		51.0	49.6		mg/Kg		97	75 - 125
Nickel	2.4		51.0	51.5		mg/Kg		96	75 - 125
Selenium	0.30	J	51.0	49.4		mg/Kg		96	75 - 125
Thallium	ND		51.0	49.1		mg/Kg		96	75 - 125
Vanadium	5.3		51.0	54.9		mg/Kg		97	75 - 125
Zinc	16		51.0	66.1		mg/Kg		97	75 - 125
Antimony	0.37	J	51.0	44.3		mg/Kg		86	75 - 125

Lab Sample ID: 440-262954-4 MSD
Matrix: Solid
Analysis Batch: 601274

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 600994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		25.3	24.6		mg/Kg		97	75 - 125	3	20
Arsenic	0.93		50.5	49.1		mg/Kg		95	75 - 125	3	20
Barium	9.2		50.5	68.0		mg/Kg		116	75 - 125	11	20
Beryllium	ND		50.5	50.3		mg/Kg		100	75 - 125	4	20
Cadmium	ND		50.5	49.1		mg/Kg		97	75 - 125	3	20
Chromium	3.2		50.5	51.5		mg/Kg		96	75 - 125	2	20
Cobalt	1.3		50.5	49.2		mg/Kg		95	75 - 125	2	20
Copper	3.6		50.5	52.2		mg/Kg		96	75 - 125	1	20
Lead	3.3		50.5	52.6		mg/Kg		98	75 - 125	1	20
Molybdenum	ND		50.5	48.0		mg/Kg		95	75 - 125	3	20
Nickel	2.4		50.5	50.9		mg/Kg		96	75 - 125	1	20
Selenium	0.30	J	50.5	46.6		mg/Kg		92	75 - 125	6	20
Thallium	ND		50.5	47.0		mg/Kg		93	75 - 125	4	20
Vanadium	5.3		50.5	54.6		mg/Kg		98	75 - 125	1	20
Zinc	16		50.5	63.8		mg/Kg		94	75 - 125	4	20
Antimony	0.37	J	50.5	42.8		mg/Kg		84	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 440-602192/1-A
Matrix: Water
Analysis Batch: 602330

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602192

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		03/24/20 18:25	03/25/20 02:42	1

Lab Sample ID: LCS 440-602192/2-A
Matrix: Water
Analysis Batch: 602330

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602192

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00400	0.00392		mg/L		98	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 440-263377-A-1-F MS
Matrix: Water
Analysis Batch: 602330

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 602192

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00400	0.00417		mg/L		104	75 - 125

Lab Sample ID: 440-263377-A-1-G MSD
Matrix: Water
Analysis Batch: 602330

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 602192

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00400	0.00411		mg/L		103	75 - 125	1	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 440-601722/1-A
Matrix: Solid
Analysis Batch: 602094

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 601722

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.012	mg/Kg		03/23/20 14:52	03/24/20 00:29	1

Lab Sample ID: LCS 440-601722/2-A
Matrix: Solid
Analysis Batch: 602094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 601722

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.400	0.375		mg/Kg		94	80 - 120

Lab Sample ID: 440-262954-4 MS
Matrix: Solid
Analysis Batch: 602094

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 601722

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.392	0.362		mg/Kg		92	75 - 125

Lab Sample ID: 440-262954-4 MSD
Matrix: Solid
Analysis Batch: 602094

Client Sample ID: SG1-031320
Prep Type: Total/NA
Prep Batch: 601722

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.392	0.330		mg/Kg		84	75 - 125	9	20

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 570-58288/4
Matrix: Solid
Analysis Batch: 58288

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon, Total Organic	ND		500	170	mg/Kg			03/17/20 11:44	1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 570-58288/10
Matrix: Solid
Analysis Batch: 58288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon, Total Organic	29900	29600		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 570-58288/8
Matrix: Solid
Analysis Batch: 58288

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon, Total Organic	29800	29000		mg/Kg		97	80 - 120	2	20

Lab Sample ID: 440-262954-4 MS
Matrix: Solid
Analysis Batch: 58288

Client Sample ID: SG1-031320
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon, Total Organic	810		29500	29700		mg/Kg		98	75 - 125

Lab Sample ID: 440-262954-4 MSD
Matrix: Solid
Analysis Batch: 58288

Client Sample ID: SG1-031320
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon, Total Organic	810		28800	28100		mg/Kg		94	75 - 125	6	25

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 440-602613/6
Matrix: Water
Analysis Batch: 602613

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.65	mg/L			03/26/20 16:48	1

Lab Sample ID: LCS 440-602613/5
Matrix: Water
Analysis Batch: 602613

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.35		mg/L		94	85 - 115

Lab Sample ID: 440-263570-C-1 MS
Matrix: Water
Analysis Batch: 602613

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	7.0		5.00	11.7		mg/L		94	85 - 115

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262954-1

Method: SM 5310B - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 440-263570-C-1 MSD
Matrix: Water
Analysis Batch: 602613

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	7.0		5.00	11.7		mg/L		95	85 - 115	0	20

GC/MS Semi VOA

Prep Batch: 57829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-3	SG1-031320-SS-EB	Total/NA	Water	3510C	
MB 570-57829/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-57829/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-57829/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-262952-E-4-B MS	Matrix Spike	Total/NA	Water	3510C	
440-262952-E-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Prep Batch: 57878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	3545	
440-262954-2	SG1-031320-SD	Total/NA	Solid	3545	
440-262954-4	SG1-031320	Total/NA	Solid	3545	
MB 570-57878/1-A	Method Blank	Total/NA	Solid	3545	
LCS 570-57878/2-A	Lab Control Sample	Total/NA	Solid	3545	
LCSD 570-57878/3-A	Lab Control Sample Dup	Total/NA	Solid	3545	
440-262954-4 MS	SG1-031320	Total/NA	Solid	3545	
440-262954-4 MSD	SG1-031320	Total/NA	Solid	3545	

Prep Batch: 57895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	3541	
440-262954-2	SG1-031320-SD	Total/NA	Solid	3541	
440-262954-4	SG1-031320	Total/NA	Solid	3541	
MB 570-57895/1-A	Method Blank	Total/NA	Solid	3541	
LCS 570-57895/2-A	Lab Control Sample	Total/NA	Solid	3541	
LCSD 570-57895/3-A	Lab Control Sample Dup	Total/NA	Solid	3541	
440-262954-4 MS	SG1-031320	Total/NA	Solid	3541	
440-262954-4 MSD	SG1-031320	Total/NA	Solid	3541	

Prep Batch: 57938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-3	SG1-031320-SS-EB	Total/NA	Water	3510C	
MB 570-57938/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-57938/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-57938/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-262952-C-4-B MS	Matrix Spike	Total/NA	Water	3510C	
440-262952-C-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 58000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	8270C SIM	57878
440-262954-2	SG1-031320-SD	Total/NA	Solid	8270C SIM	57878
440-262954-3	SG1-031320-SS-EB	Total/NA	Water	8270C SIM	57829
440-262954-4	SG1-031320	Total/NA	Solid	8270C SIM	57878
MB 570-57829/1-A	Method Blank	Total/NA	Water	8270C SIM	57829
MB 570-57878/1-A	Method Blank	Total/NA	Solid	8270C SIM	57878
LCS 570-57829/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	57829
LCSD 570-57829/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	57829
LCSD 570-57878/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	57878
440-262952-E-4-B MS	Matrix Spike	Total/NA	Water	8270C SIM	57829
440-262952-E-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	8270C SIM	57829

GC/MS Semi VOA (Continued)

Analysis Batch: 58000 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-4 MS	SG1-031320	Total/NA	Solid	8270C SIM	57878
440-262954-4 MSD	SG1-031320	Total/NA	Solid	8270C SIM	57878

Analysis Batch: 58298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-57878/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	57878

Analysis Batch: 58315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	8270C SIM CON	57895
440-262954-2	SG1-031320-SD	Total/NA	Solid	8270C SIM CON	57895
440-262954-3	SG1-031320-SS-EB	Total/NA	Water	8270C SIM CON	57938
440-262954-4	SG1-031320	Total/NA	Solid	8270C SIM CON	57895
MB 570-57895/1-A	Method Blank	Total/NA	Solid	8270C SIM CON	57895
MB 570-57938/1-A	Method Blank	Total/NA	Water	8270C SIM CON	57938
LCS 570-57895/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM CON	57895
LCS 570-57938/2-A	Lab Control Sample	Total/NA	Water	8270C SIM CON	57938
LCSD 570-57895/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM CON	57895
LCSD 570-57938/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM CON	57938
440-262952-C-4-B MS	Matrix Spike	Total/NA	Water	8270C SIM CON	57938
440-262952-C-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	8270C SIM CON	57938
440-262954-4 MS	SG1-031320	Total/NA	Solid	8270C SIM CON	57895
440-262954-4 MSD	SG1-031320	Total/NA	Solid	8270C SIM CON	57895

GC Semi VOA

Prep Batch: 600622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-3	SG1-031320-SS-EB	Total/NA	Water	3510C	
MB 440-600622/1-A	Method Blank	Total/NA	Water	3510C	
LCS 440-600622/2-A	Lab Control Sample	Total/NA	Water	3510C	
440-262952-B-4-A MS	Matrix Spike	Total/NA	Water	3510C	
440-262952-B-4-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 600738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-3	SG1-031320-SS-EB	Total/NA	Water	8081A	600622
MB 440-600622/1-A	Method Blank	Total/NA	Water	8081A	600622
LCS 440-600622/2-A	Lab Control Sample	Total/NA	Water	8081A	600622
440-262952-B-4-A MS	Matrix Spike	Total/NA	Water	8081A	600622
440-262952-B-4-B MSD	Matrix Spike Duplicate	Total/NA	Water	8081A	600622

Prep Batch: 601087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	3546	
440-262954-2	SG1-031320-SD	Total/NA	Solid	3546	
440-262954-4	SG1-031320	Total/NA	Solid	3546	
MB 440-601087/1-A	Method Blank	Total/NA	Solid	3546	
LCS 440-601087/2-A	Lab Control Sample	Total/NA	Solid	3546	
440-262954-4 MS	SG1-031320	Total/NA	Solid	3546	
440-262954-4 MSD	SG1-031320	Total/NA	Solid	3546	

GC Semi VOA

Analysis Batch: 601158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	8081A	601087
440-262954-2	SG1-031320-SD	Total/NA	Solid	8081A	601087
440-262954-4	SG1-031320	Total/NA	Solid	8081A	601087
MB 440-601087/1-A	Method Blank	Total/NA	Solid	8081A	601087
LCS 440-601087/2-A	Lab Control Sample	Total/NA	Solid	8081A	601087
440-262954-4 MS	SG1-031320	Total/NA	Solid	8081A	601087
440-262954-4 MSD	SG1-031320	Total/NA	Solid	8081A	601087

Metals

Prep Batch: 600994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	3050B	
440-262954-2	SG1-031320-SD	Total/NA	Solid	3050B	
440-262954-4	SG1-031320	Total/NA	Solid	3050B	
MB 440-600994/1-A ^20	Method Blank	Total/NA	Solid	3050B	
LCS 440-600994/2-A ^20	Lab Control Sample	Total/NA	Solid	3050B	
440-262954-4 MS	SG1-031320	Total/NA	Solid	3050B	
440-262954-4 MSD	SG1-031320	Total/NA	Solid	3050B	

Analysis Batch: 601274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	6020	600994
440-262954-2	SG1-031320-SD	Total/NA	Solid	6020	600994
440-262954-4	SG1-031320	Total/NA	Solid	6020	600994
MB 440-600994/1-A ^20	Method Blank	Total/NA	Solid	6020	600994
LCS 440-600994/2-A ^20	Lab Control Sample	Total/NA	Solid	6020	600994
440-262954-4 MS	SG1-031320	Total/NA	Solid	6020	600994
440-262954-4 MSD	SG1-031320	Total/NA	Solid	6020	600994

Prep Batch: 601392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-3	SG1-031320-SS-EB	Total Recoverable	Water	200.2	
MB 440-601392/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-601392/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
LCSD 440-601392/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.2	

Analysis Batch: 601500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-3	SG1-031320-SS-EB	Total Recoverable	Water	200.8 LL	601392
MB 440-601392/1-A	Method Blank	Total Recoverable	Water	200.8 LL	601392
LCS 440-601392/2-A	Lab Control Sample	Total Recoverable	Water	200.8 LL	601392
LCSD 440-601392/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8 LL	601392

Prep Batch: 601722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	7471A	
440-262954-2	SG1-031320-SD	Total/NA	Solid	7471A	
440-262954-4	SG1-031320	Total/NA	Solid	7471A	
MB 440-601722/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 440-601722/2-A	Lab Control Sample	Total/NA	Solid	7471A	

Metals (Continued)

Prep Batch: 601722 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-4 MS	SG1-031320	Total/NA	Solid	7471A	
440-262954-4 MSD	SG1-031320	Total/NA	Solid	7471A	

Analysis Batch: 602094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	7471A	601722
440-262954-2	SG1-031320-SD	Total/NA	Solid	7471A	601722
440-262954-4	SG1-031320	Total/NA	Solid	7471A	601722
MB 440-601722/1-A	Method Blank	Total/NA	Solid	7471A	601722
LCS 440-601722/2-A	Lab Control Sample	Total/NA	Solid	7471A	601722
440-262954-4 MS	SG1-031320	Total/NA	Solid	7471A	601722
440-262954-4 MSD	SG1-031320	Total/NA	Solid	7471A	601722

Prep Batch: 602192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-3	SG1-031320-SS-EB	Total/NA	Water	7470A	
MB 440-602192/1-A	Method Blank	Total/NA	Water	7470A	
LCS 440-602192/2-A	Lab Control Sample	Total/NA	Water	7470A	
440-263377-A-1-F MS	Matrix Spike	Total/NA	Water	7470A	
440-263377-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 602330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-3	SG1-031320-SS-EB	Total/NA	Water	7470A	602192
MB 440-602192/1-A	Method Blank	Total/NA	Water	7470A	602192
LCS 440-602192/2-A	Lab Control Sample	Total/NA	Water	7470A	602192
440-263377-A-1-F MS	Matrix Spike	Total/NA	Water	7470A	602192
440-263377-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	602192

General Chemistry

Analysis Batch: 58288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	9060A	
440-262954-2	SG1-031320-SD	Total/NA	Solid	9060A	
440-262954-4	SG1-031320	Total/NA	Solid	9060A	
MB 570-58288/4	Method Blank	Total/NA	Solid	9060A	
LCS 570-58288/10	Lab Control Sample	Total/NA	Solid	9060A	
LCSD 570-58288/8	Lab Control Sample Dup	Total/NA	Solid	9060A	
440-262954-4 MS	SG1-031320	Total/NA	Solid	9060A	
440-262954-4 MSD	SG1-031320	Total/NA	Solid	9060A	

Analysis Batch: 602613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-3	SG1-031320-SS-EB	Total/NA	Water	SM 5310B	
MB 440-602613/6	Method Blank	Total/NA	Water	SM 5310B	
LCS 440-602613/5	Lab Control Sample	Total/NA	Water	SM 5310B	
440-263570-C-1 MS	Matrix Spike	Total/NA	Water	SM 5310B	
440-263570-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310B	

Geotechnical

Analysis Batch: 58680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262954-1	SG1-031320-SS	Total/NA	Solid	D422	

Definitions/Glossary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-262954-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F2	MS/MSD RPD exceeds control limits
F7	MS/MSD RPD exceeds control limits. Sample size differs by <10%
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: CH2M Hill, Inc.
Job ID: 440-262954-1
Project/Site: KMEP/SFPP Norwalk Site

Laboratory: Eurofins Calscience Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska	State	CA01531	06-30-20
Arizona	State	AZ0671	10-14-20
California	Los Angeles County Sanitation Districts	10256	06-30-20
California	State	2706	06-30-20
Guam	State	20-004R	01-23-21
Hawaii	State	CA01531	01-29-21
Kansas	NELAP	E-10420	07-31-20
Nevada	State	CA015312020-7	07-31-20
Oregon	NELAP	4028 - 007	01-29-21
USDA	US Federal Programs	P330-18-00214	07-09-21
Washington	State	C900	09-03-20

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

Test America

CHAIN OF CUSTODY RECORD

DATE: March 13 2020
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: Ryan Koch	Report To.	Eric Davis	Attention:	Ryan Koch - Ref. AFE# 81195	Sampler Name:	Nils Orliczky
Address	1001 Louisiana St , Houston, TX 77002	Copy To	Ryan Koch	Company Name.	Kinder Morgan Energy Partners	Sampler Signature:	
Email To	Ryan_Koch@kindermorgan.com eric.davis@iacobs.com	Purchase Order No.		Address	1001 Louisiana St , Houston, TX 77002	Sample Date.	3-13-20
Phone	713-420-6730 Fax 714-560-4801	Project Name:	SFPP Norwalk	TA Project Manager.	Janice Hsu		

Section E Required Sample Information

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS	Analysis Test	Total Organic Compound	Metals (EPA 200.8)	Pesticides (SW8081A)	PAHs (SW8270A-SIM)	PCBs (EPA 1668A)	Grain size, Percent Fines (D422)	Comments
CONTAINER TYPE									G	G	G	G	G		
# OF CONTAINERS											2	1	1		
PRESERVATIVE															
VOLUME (mL)									250						
1	SG1-03120-SS	Mouth of San Gabriel River	S	G	3/13/20	1445	3		x	x	x	x	x	x	
2	SG1-03120-SD	San Gabriel River	S	G	3/13/20	1445	3		x	x	x	x	x		Metals: Cd, Cu, Pb, Ni, Hg, Zn
3	SG1-03120-SS-EB	Equipment Blank	W	G	3/13/20	1205	6		x	x	x	x	x		Pesticides alpha chlordane, gamma chlordane, trans nonachlor, dieldrin, DDT derivatives
4	SG1-03120-MS/MSD	MS/MSD	S	G	3/13/20	1445	6		x	x	x	x	x		PAHs: 1-methylnaphthalene, 1-methylphenanthrene, 2-methylnaphthalene, 2,6-dimethylnaphthalene, acenaphthene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(e)pyrene, biphenyl, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, naphthalene, phenanthrene, perylene, pyrene
5															PCB Congeners. PCB-8, PCB-18, PCB-28, PCB-44, PCB-52,PCB-66, PCB-101, PCB-105, PCB-118,PCB-128, PCB-138), PCB-153, PCB-170, PCB-180, PCB-187, PCB-195, PCB-206, decachlorobiphenyl
6															
7															
8															
9															
10															
11															
12															

440-262954 Chain of Custody

3/13/20 LD

Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
	3-13-20 / 1711		
Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
		EC IR-V	3/13/20 17:11

IR-V 3
5.0 / 5.2
4.9 / 5.1

Turn Around Time (TAT)

- A = Same Day
- B = 24 Hours
- C = 48 Hours
- D = 72 Hours
- E = 5 Workdays
- X E = 10 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM

Special Instruction

Also report pesticides as Total DDT

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

Eurofins Calscience Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone: 949-261-1022 Fax: 949-260-3297

Chain of Custody Record

eurofins | Calscience

Loc: 440
262954

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hsu, Janice	Carrier Tracking No(s):	COC No: 440-153961.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: janice.hsu@testamericainc.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Calscience LLC		Accreditations Required (See note):		Job #: 440-262954-1
Address: 7440 Lincoln Way,	Due Date Requested: 3/26/2020			
City: Garden Grove	TAT Requested (days):			
State, Zip: CA, 92841				
Phone: 714-895-5494(Tel) 714-894-7501(Fax)	PO #:			
Email:	WO #:			
Project Name: KMEP/SFPP Norwalk Site	Project #: 44011238			
Site: KMEP Norwalk Airs	SSOW#:			

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270C_SIM_PAH/3545 (MOD) SIM PAH	8270C_SIM_CON/3541 (MOD) SIM Congeners	9060A_DW/ Total Organic Carbon	D422/ Grain Size	8270C_SIM_PAH/3510C SIM PAH	8270C_SIM_CON/3510C (MOD) SIM Congeners	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X	X							X	
SG1-031320-SS (440-262954-1)	3/13/20	14:44 Pacific		Solid			X	X	X	X			1	
SG1-031320-SD (440-262954-2)	3/13/20	14:44 Pacific		Solid			X	X	X				1	
SG1-031320-SS-EB (440-262954-3)	3/13/20	12:05 Pacific		Water							X	X	2	
SG1-031320 (440-262954-4)	3/13/20	14:45 Pacific		Solid			X	X	X				1	
SG1-031320 (440-262954-4MS)	3/13/20	14:45 Pacific	MS	Solid			X	X	X				1	
SG1-031320 (440-262954-4MSD)	3/13/20	14:45 Pacific	MSD	Solid			X	X	X				1	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Calscience.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ______ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: Teresa Ortiz [signature]	Date/Time: 3-16-20	Company: ECIRV	Received by: [signature]	Date/Time: 3/16/20 1710	Company: EC
Relinquished by: [signature]	Date/Time: 3/16/20 1630	Company: EC	Received by: [signature]	Date/Time: 3/16/20 1630	Company: EC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

2.1/2.7 SCC

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 440-262954-1

Login Number: 262954
List Number: 1
Creator: Dolidze, Lado

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 440-262954-1

Login Number: 262954
List Number: 2
Creator: Andujo, Italy

List Source: Eurofins Calscience
List Creation: 03/16/20 10:12 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

SWAMP Field Data Sheet (Water Chemistry & Discrete Probe) - EventType=WQ

Entered in d-base (initial/date) | Pg 1 of 1 Pgs

*StationID: SFPP NORWALK PUMP STATION | *Date (mm/dd/yyyy): 4/7/2020 | *Group: NA | *Agency: Jacobs Engineering

*Funding: _____ | ArrivalTime: 1030 | DepartureTime: 1330 | *SampleTime (1st sample): 12:30 | *Protocol:

*ProjectCode: | *Personnel: N. Orliczky / D. Hill | *Purpose (circle applicable): (WaterChem) WaterTox Habitat FieldMeas | *PurposeFailure:

*Location: Bank Thalweg (Midchannel) OpenWater | *GPS/DGPS | Lat (dd.ddddd) | Long (ddd.ddddd) | OCCUPATION METHOD: Walk-in (Bridge) R/V _____ Other

GPS Device: Google Earth | Target: | 33.74821 | -118.112072 | STARTING BANK (facing downstream): LB / (RB) / NA

Datum: NAD83 | Accuracy (ft / m): 1.59m | *Actual: | 33.747027 | -118.113248 | Point of Sample (if Integrated, then -88 in dbase)

Habitat Observations (CollectionMethod = Habitat_generic)

WADEABILITY: Y / (N) / Unk | BEAUFORT SCALE (see attachment): | DISTANCE FROM BANK (m): 49 | STREAM WIDTH (m): 109 | WATER DEPTH (m): 11 ft

SITE ODOR: (None), Sulfides, Sewage, Petroleum, Smoke, Other_____

SKY CODE: Clear, Partly Cloudy, (Overcast), Fog, Smoky, Hazy | WIND DIRECTION (from): W

HYDROMODIFICATION: None, Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other | LOCATION (to sample): US / DS / WI / NA

OTHER PRESENCE: Vascular, Nonvascular, OilySheen, Foam, Trash, Other_____

DOMINANT SUBSTRATE: Bedrock, Concrete, Cobble, Boulder, Gravel, Sand, Mud, (Unk), Other_____

PHOTOS (RB & LB assigned when facing downstream; RENAME to StationCode_yyyy_mm_dd_uniquecode): 1: (RB / LB / BB / US / DS / ##)

WATERCLARITY: Clear (see bottom), (Cloudy (>4" vis)), Murky (<4" vis) | PRECIPITATION: None, Fog, Drizzle, (Rain), Snow | 2: (RB / LB / BB / US / DS / ##)

WATERODOR: (None), Sulfides, Sewage, Petroleum, Mixed, Other_____ | PRECIPITATION (last 24 hrs): Unknown, (<1"), >1", None

WATERCOLOR: Colorless, Green, Yellow, (Brown) | EVIDENCE OF FIRES: (No) <1 year, <5 years | 3: (RB / LB / BB / US / DS / ##)

OVERLAND RUNOFF (Last 24 hrs): none, light, (moderate / heavy), unknown

OBSERVED FLOW: NA, Dry Waterbody Bed, No Obs Flow, Isolated Pool, Trickle (<0.1cfs), 0.1-1cfs, 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, (>200cfs)

Field Measurements (SampleType = FieldMeasure; Method = Field)

	DepthCollec (m)	Velocity (fps)	Air Temp (°C)	Water Temp (°C)	pH	DO (mg/L)	DO (%)	Specific Conductivity (uS/cm)	Salinity (ppt)	Turbidity (ntu)		
SUBSURF/MID/ BOTTOM/REP	0.2	1.1	60°F	21.74	6.78	8.41	–	42.7	26.6	0		
SUBSURF/MID/ BOTTOM/REP												
SUBSURF/MID/ BOTTOM/REP												
Instrument:	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-53	Horiba U-52	Horiba U-52	Horiba U-52		
Calib. Date:				4-3-20	4-3-20	4-3-20	4-3-20	4-3-20	4-3-20	4-3-20		

Samples Taken (# of containers filled) - Method=Water_Grab

Field Dup YES / NO: (SampleType = Grab) Integrated; LABEL_ID = FieldQA; create collection record upon data entry

SAMPLE TYPE: (Grab) / Integrated | COLLECTION DEVICE: | Indiv bottle (by hand, by pole, by bucket); (Teflon tubing); Kemmer; Pole & Beaker; Other _____

	DepthCollec (m)	Inorganics	Bacteria	Chl a	TSS / SSC	TOC / DOC	Total Hg	Dissolved Mercury	Total Metals	Dissolved Metals	Organics	Toxicity	VOAs
Sub/Surface	0.2	X			X			NO 4-7-20	X				
Sub/Surface													

COMMENTS: Secchi Disc = 1.5" visibility, 1.1 ft/s, water depth 11, 15.3' depth to water

Modified 02/10/1

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
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Laboratory Job ID: 440-264279-1
Client Project/Site: KMEP/SFPP Norwalk Site

For:
CH2M Hill, Inc.
6 Hutton Centre Drive, Suite 700
Santa Ana, California 92707

Attn: Eric Davis

Authorized for release by:
4/20/2020 4:31:42 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-264279-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-264279-1	SG1-040720-DW	Water	04/07/20 12:30	04/07/20 16:20	
440-264279-2	SG1-040720-DD	Water	04/07/20 12:30	04/07/20 16:20	
440-264279-3	SG1-040720-EB	Water	04/07/20 11:35	04/07/20 16:20	
440-264279-4	SG1-040720	Water	04/07/20 12:30	04/07/20 16:20	

Job ID: 440-264279-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative
440-264279-1

Comments
No additional comments.

Receipt
The samples were received on 4/7/2020 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 4.0º C, 4.7º C and 5.0º C.

GC/MS Semi VOA
Method 8270C SIM: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 570-62462 and analytical batch 570-63010 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 200.8: The following samples were diluted due to the nature of the sample matrix: SG1-040720-DW (440-264279-1), SG1-040720-DD (440-264279-2) and SG1-040720 (440-264279-4). Elevated reporting limits (RLs) are provided.

Method 200.8: The following samples were diluted due to the presence of Na which interferes with the internal standards. SG1-040720-DW (440-264279-1), SG1-040720-DD (440-264279-2) and SG1-040720 (440-264279-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-264279-1

Client Sample ID: SG1-040720-DW

Date Collected: 04/07/20 12:30
Date Received: 04/07/20 16:20

Lab Sample ID: 440-264279-1

Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0038	0.00048	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-18	ND		0.0019	0.00044	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-28	ND		0.0019	0.00050	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-44	ND		0.0019	0.00067	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-52	ND		0.0019	0.00053	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-66	ND		0.0019	0.00038	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-101	ND		0.0019	0.00047	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-105	ND		0.0019	0.00044	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-118	ND		0.0019	0.00047	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-128	ND		0.0019	0.00041	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-132/153	ND		0.0038	0.00065	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-138/158	ND		0.0038	0.00056	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-170	ND		0.0019	0.00040	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-180	ND		0.0019	0.00057	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-187	ND		0.0019	0.00041	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-195	ND		0.0019	0.00071	ug/L		04/10/20 07:07	04/14/20 18:00	1
PCB-206	ND		0.0019	0.00041	ug/L		04/10/20 07:07	04/14/20 18:00	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		04/10/20 07:07	04/14/20 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*67*		*50 - 150*	*04/10/20 07:07*	*04/14/20 18:00*	*1*
p-Terphenyl-d14 (Surr)	*89*		*50 - 150*	*04/10/20 07:07*	*04/14/20 18:00*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**0.025**	**J**	0.19	0.0098	ug/L		04/10/20 10:11	04/14/20 14:35	1
2-Methylnaphthalene	**0.035**	**J**	0.19	0.012	ug/L		04/10/20 10:11	04/14/20 14:35	1
Acenaphthene	ND		0.19	0.013	ug/L		04/10/20 10:11	04/14/20 14:35	1
Acenaphthylene	ND		0.19	0.010	ug/L		04/10/20 10:11	04/14/20 14:35	1
Anthracene	ND		0.19	0.014	ug/L		04/10/20 10:11	04/14/20 14:35	1
Benzo[g,h,i]perylene	ND		0.19	0.020	ug/L		04/10/20 10:11	04/14/20 14:35	1
Benzo[k]fluoranthene	ND		0.19	0.0098	ug/L		04/10/20 10:11	04/14/20 14:35	1
Benzo[a]anthracene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 14:35	1
Benzo[a]pyrene	ND		0.19	0.017	ug/L		04/10/20 10:11	04/14/20 14:35	1
Benzo[b]fluoranthene	ND		0.19	0.021	ug/L		04/10/20 10:11	04/14/20 14:35	1
Chrysene	ND		0.19	0.021	ug/L		04/10/20 10:11	04/14/20 14:35	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		04/10/20 10:11	04/14/20 14:35	1
Fluoranthene	ND		0.19	0.014	ug/L		04/10/20 10:11	04/14/20 14:35	1
Fluorene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 14:35	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.020	ug/L		04/10/20 10:11	04/14/20 14:35	1
Naphthalene	**0.026**	**J**	0.19	0.013	ug/L		04/10/20 10:11	04/14/20 14:35	1
Phenanthrene	ND		0.19	0.0048	ug/L		04/10/20 10:11	04/14/20 14:35	1
Pyrene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*99*		*33 - 144*	*04/10/20 10:11*	*04/14/20 14:35*	*1*
Nitrobenzene-d5 (Surr)	*96*		*28 - 139*	*04/10/20 10:11*	*04/14/20 14:35*	*1*
p-Terphenyl-d14 (Surr)	*88*		*23 - 160*	*04/10/20 10:11*	*04/14/20 14:35*	*1*

Client Sample ID: SG1-040720-DW

Date Collected: 04/07/20 12:30
Date Received: 04/07/20 16:20

Lab Sample ID: 440-264279-1
Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.0047	0.0023	ug/L		04/09/20 05:23	04/10/20 17:58	1
4,4'-DDT	ND		0.0047	0.0023	ug/L		04/09/20 05:23	04/10/20 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*66*		*28 - 108*	*04/09/20 05:23*	*04/10/20 17:58*	*1*
Tetrachloro-m-xylene	*55*		*10 - 123*	*04/09/20 05:23*	*04/10/20 17:58*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		10	10	ug/L		04/09/20 10:25	04/10/20 11:24	20
Lead	ND		10	10	ug/L		04/09/20 10:25	04/09/20 20:12	20
Zinc	ND		50	50	ug/L		04/09/20 10:25	04/09/20 20:12	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**9.7**		1.0	0.50	mg/L			04/10/20 19:44	1

Client Sample ID: SG1-040720-DD

Date Collected: 04/07/20 12:30
Date Received: 04/07/20 16:20

Lab Sample ID: 440-264279-2
Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0037	0.00048	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-18	ND		0.0019	0.00043	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-28	ND		0.0019	0.00049	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-44	ND		0.0019	0.00066	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-52	ND		0.0019	0.00052	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-66	ND		0.0019	0.00037	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-101	ND		0.0019	0.00046	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-105	ND		0.0019	0.00044	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-118	ND		0.0019	0.00047	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-128	ND		0.0019	0.00040	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-132/153	ND		0.0037	0.00065	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-138/158	ND		0.0037	0.00056	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-170	ND		0.0019	0.00039	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-180	ND		0.0019	0.00056	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-187	ND		0.0019	0.00040	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-195	ND		0.0019	0.00070	ug/L		04/10/20 07:07	04/14/20 18:29	1
PCB-206	ND		0.0019	0.00040	ug/L		04/10/20 07:07	04/14/20 18:29	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		04/10/20 07:07	04/14/20 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*50 - 150*	*04/10/20 07:07*	*04/14/20 18:29*	*1*
p-Terphenyl-d14 (Surr)	*88*		*50 - 150*	*04/10/20 07:07*	*04/14/20 18:29*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.19	0.0098	ug/L		04/10/20 10:11	04/14/20 14:58	1
2-Methylnaphthalene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 14:58	1
Acenaphthene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 14:58	1

Client Sample ID: SG1-040720-DD

Date Collected: 04/07/20 12:30
Date Received: 04/07/20 16:20

Lab Sample ID: 440-264279-2

Matrix: Water

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.19	0.010	ug/L		04/10/20 10:11	04/14/20 14:58	1
Anthracene	ND		0.19	0.014	ug/L		04/10/20 10:11	04/14/20 14:58	1
Benzo[g,h,i]perylene	ND		0.19	0.020	ug/L		04/10/20 10:11	04/14/20 14:58	1
Benzo[k]fluoranthene	ND		0.19	0.0098	ug/L		04/10/20 10:11	04/14/20 14:58	1
Benzo[a]anthracene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 14:58	1
Benzo[a]pyrene	ND		0.19	0.017	ug/L		04/10/20 10:11	04/14/20 14:58	1
Benzo[b]fluoranthene	ND		0.19	0.021	ug/L		04/10/20 10:11	04/14/20 14:58	1
Chrysene	ND		0.19	0.021	ug/L		04/10/20 10:11	04/14/20 14:58	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		04/10/20 10:11	04/14/20 14:58	1
Fluoranthene	ND		0.19	0.014	ug/L		04/10/20 10:11	04/14/20 14:58	1
Fluorene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 14:58	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.020	ug/L		04/10/20 10:11	04/14/20 14:58	1
Naphthalene	ND		0.19	0.013	ug/L		04/10/20 10:11	04/14/20 14:58	1
Phenanthrene	ND		0.19	0.0048	ug/L		04/10/20 10:11	04/14/20 14:58	1
Pyrene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*35*		*33 - 144*	*04/10/20 10:11*	*04/14/20 14:58*	*1*
Nitrobenzene-d5 (Surr)	*33*		*28 - 139*	*04/10/20 10:11*	*04/14/20 14:58*	*1*
p-Terphenyl-d14 (Surr)	*30*		*23 - 160*	*04/10/20 10:11*	*04/14/20 14:58*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.0047	0.0023	ug/L		04/09/20 05:23	04/10/20 17:32	1
4,4'-DDT	ND		0.0047	0.0023	ug/L		04/09/20 05:23	04/10/20 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*63*		*28 - 108*	*04/09/20 05:23*	*04/10/20 17:32*	*1*
Tetrachloro-m-xylene	*51*		*10 - 123*	*04/09/20 05:23*	*04/10/20 17:32*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		10	10	ug/L		04/09/20 10:25	04/10/20 11:26	20
Lead	ND		10	10	ug/L		04/09/20 10:25	04/09/20 20:14	20
Zinc	ND		50	50	ug/L		04/09/20 10:25	04/09/20 20:14	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**10**		1.0	0.50	mg/L			04/10/20 19:44	1

Client Sample ID: SG1-040720-EB

Date Collected: 04/07/20 11:35
Date Received: 04/07/20 16:20

Lab Sample ID: 440-264279-3

Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0038	0.00049	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-18	ND		0.0019	0.00044	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-28	ND		0.0019	0.00050	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-44	ND		0.0019	0.00068	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-52	ND		0.0019	0.00053	ug/L		04/10/20 07:07	04/14/20 18:58	1

Client Sample ID: SG1-040720-EB
Date Collected: 04/07/20 11:35
Date Received: 04/07/20 16:20

Lab Sample ID: 440-264279-3
Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-66	ND		0.0019	0.00038	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-101	ND		0.0019	0.00048	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-105	ND		0.0019	0.00045	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-118	ND		0.0019	0.00048	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-128	ND		0.0019	0.00041	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-132/153	ND		0.0038	0.00066	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-138/158	ND		0.0038	0.00057	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-170	ND		0.0019	0.00040	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-180	ND		0.0019	0.00058	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-187	ND		0.0019	0.00041	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-195	ND		0.0019	0.00072	ug/L		04/10/20 07:07	04/14/20 18:58	1
PCB-206	ND		0.0019	0.00041	ug/L		04/10/20 07:07	04/14/20 18:58	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		04/10/20 07:07	04/14/20 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*57*		*50 - 150*	*04/10/20 07:07*	*04/14/20 18:58*	*1*
p-Terphenyl-d14 (Surr)	*81*		*50 - 150*	*04/10/20 07:07*	*04/14/20 18:58*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.19	0.010	ug/L		04/10/20 10:11	04/14/20 15:20	1
2-Methylnaphthalene	ND		0.19	0.013	ug/L		04/10/20 10:11	04/14/20 15:20	1
Acenaphthene	ND		0.19	0.013	ug/L		04/10/20 10:11	04/14/20 15:20	1
Acenaphthylene	ND		0.19	0.010	ug/L		04/10/20 10:11	04/14/20 15:20	1
Anthracene	ND		0.19	0.014	ug/L		04/10/20 10:11	04/14/20 15:20	1
Benzo[g,h,i]perylene	ND		0.19	0.020	ug/L		04/10/20 10:11	04/14/20 15:20	1
Benzo[k]fluoranthene	ND		0.19	0.010	ug/L		04/10/20 10:11	04/14/20 15:20	1
Benzo[a]anthracene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 15:20	1
Benzo[a]pyrene	ND		0.19	0.018	ug/L		04/10/20 10:11	04/14/20 15:20	1
Benzo[b]fluoranthene	ND		0.19	0.022	ug/L		04/10/20 10:11	04/14/20 15:20	1
Chrysene	ND		0.19	0.022	ug/L		04/10/20 10:11	04/14/20 15:20	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		04/10/20 10:11	04/14/20 15:20	1
Fluoranthene	ND		0.19	0.014	ug/L		04/10/20 10:11	04/14/20 15:20	1
Fluorene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 15:20	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.021	ug/L		04/10/20 10:11	04/14/20 15:20	1
Naphthalene	ND		0.19	0.013	ug/L		04/10/20 10:11	04/14/20 15:20	1
Phenanthrene	ND		0.19	0.0049	ug/L		04/10/20 10:11	04/14/20 15:20	1
Pyrene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*105*		*33 - 144*	*04/10/20 10:11*	*04/14/20 15:20*	*1*
Nitrobenzene-d5 (Surr)	*102*		*28 - 139*	*04/10/20 10:11*	*04/14/20 15:20*	*1*
p-Terphenyl-d14 (Surr)	*92*		*23 - 160*	*04/10/20 10:11*	*04/14/20 15:20*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.0047	0.0024	ug/L		04/09/20 05:23	04/10/20 17:06	1
4,4'-DDT	ND		0.0047	0.0024	ug/L		04/09/20 05:23	04/10/20 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*65*		*28 - 108*	*04/09/20 05:23*	*04/10/20 17:06*	*1*

Client Sample ID: SG1-040720-EB

Date Collected: 04/07/20 11:35
Date Received: 04/07/20 16:20

Lab Sample ID: 440-264279-3

Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*10 - 123*	*04/09/20 05:23*	*04/10/20 17:06*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.50	0.50	ug/L		04/09/20 10:25	04/10/20 13:54	1
Lead	ND		0.50	0.50	ug/L		04/09/20 10:25	04/10/20 13:54	1
Zinc	**3.3**		2.5	2.5	ug/L		04/09/20 10:25	04/10/20 13:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			04/10/20 19:44	1

Client Sample ID: SG1-040720

Date Collected: 04/07/20 12:30
Date Received: 04/07/20 16:20

Lab Sample ID: 440-264279-4

Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0037	0.00048	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-18	ND		0.0019	0.00043	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-28	ND		0.0019	0.00049	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-44	ND		0.0019	0.00066	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-52	ND		0.0019	0.00052	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-66	ND		0.0019	0.00037	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-101	ND		0.0019	0.00046	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-105	ND		0.0019	0.00044	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-118	ND		0.0019	0.00046	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-128	ND		0.0019	0.00040	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-132/153	ND		0.0037	0.00065	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-138/158	ND		0.0037	0.00055	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-170	ND		0.0019	0.00039	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-180	ND		0.0019	0.00056	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-187	ND		0.0019	0.00040	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-195	ND		0.0019	0.00070	ug/L		04/10/20 07:07	04/14/20 19:26	1
PCB-206	ND		0.0019	0.00040	ug/L		04/10/20 07:07	04/14/20 19:26	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		04/10/20 07:07	04/14/20 19:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*67*		*50 - 150*	*04/10/20 07:07*	*04/14/20 19:26*	*1*
p-Terphenyl-d14 (Surr)	*100*		*50 - 150*	*04/10/20 07:07*	*04/14/20 19:26*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**0.011**	**J F2**	0.19	0.0099	ug/L		04/10/20 10:11	04/14/20 20:12	1
2-Methylnaphthalene	**0.016**	**J**	0.19	0.013	ug/L		04/10/20 10:11	04/14/20 20:12	1
Acenaphthene	ND	F2	0.19	0.013	ug/L		04/10/20 10:11	04/14/20 20:12	1
Acenaphthylene	ND	F2	0.19	0.010	ug/L		04/10/20 10:11	04/14/20 20:12	1
Anthracene	ND		0.19	0.014	ug/L		04/10/20 10:11	04/14/20 20:12	1
Benzo[g,h,i]perylene	ND		0.19	0.020	ug/L		04/10/20 10:11	04/14/20 20:12	1
Benzo[k]fluoranthene	ND		0.19	0.0099	ug/L		04/10/20 10:11	04/14/20 20:12	1

Client Sample ID: SG1-040720

Date Collected: 04/07/20 12:30
Date Received: 04/07/20 16:20

Lab Sample ID: 440-264279-4

Matrix: Water

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 20:12	1
Benzo[a]pyrene	ND		0.19	0.017	ug/L		04/10/20 10:11	04/14/20 20:12	1
Benzo[b]fluoranthene	ND	F2	0.19	0.021	ug/L		04/10/20 10:11	04/14/20 20:12	1
Chrysene	ND		0.19	0.021	ug/L		04/10/20 10:11	04/14/20 20:12	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		04/10/20 10:11	04/14/20 20:12	1
Fluoranthene	ND		0.19	0.014	ug/L		04/10/20 10:11	04/14/20 20:12	1
Fluorene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 20:12	1
Indeno[1,2,3-cd]pyrene	ND	F2	0.19	0.021	ug/L		04/10/20 10:11	04/14/20 20:12	1
Naphthalene	ND		0.19	0.013	ug/L		04/10/20 10:11	04/14/20 20:12	1
Phenanthrene	**0.0057**	**J**	0.19	0.0048	ug/L		04/10/20 10:11	04/14/20 20:12	1
Pyrene	ND		0.19	0.012	ug/L		04/10/20 10:11	04/14/20 20:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*47*		*33 - 144*	*04/10/20 10:11*	*04/14/20 20:12*	*1*
Nitrobenzene-d5 (Surr)	*40*		*28 - 139*	*04/10/20 10:11*	*04/14/20 20:12*	*1*
p-Terphenyl-d14 (Surr)	*47*		*23 - 160*	*04/10/20 10:11*	*04/14/20 20:12*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.0047	0.0023	ug/L		04/09/20 05:23	04/10/20 16:39	1
4,4'-DDT	ND		0.0047	0.0023	ug/L		04/09/20 05:23	04/10/20 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*66*		*28 - 108*	*04/09/20 05:23*	*04/10/20 16:39*	*1*
Tetrachloro-m-xylene	*54*		*10 - 123*	*04/09/20 05:23*	*04/10/20 16:39*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		10	10	ug/L		04/09/20 10:25	04/10/20 11:18	20
Lead	ND		10	10	ug/L		04/09/20 10:25	04/09/20 20:06	20
Zinc	ND		50	50	ug/L		04/09/20 10:25	04/09/20 20:06	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**11**		1.0	0.50	mg/L			04/11/20 15:41	1

Method Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-264279-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs (GC/MS SIM)	SW846	ECL 1
8270C SIM CON	PCB Congeners (GC/MS)	SW846	ECL 1
8081A	Organochlorine Pesticides (GC)	SW846	TAL IRV
200.8	Metals (ICP/MS)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ECL 1
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: CH2M Hill, Inc.
Job ID: 440-264279-1
Project/Site: KMEP/SFPP Norwalk Site

Client Sample ID: SG1-040720-DW
Lab Sample ID: 440-264279-1
Date Collected: 04/07/20 12:30
Matrix: Water
Date Received: 04/07/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1070.1 mL	2 mL	62462	04/10/20 10:11	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM		1			63010	04/14/20 14:35	AJ2Q	ECL 1
Total/NA	Prep	3510C			1056.8 mL	1 mL	62379	04/10/20 07:07	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM CON		1			63040	04/14/20 18:00	AJ2Q	ECL 1
Total/NA	Prep	3510C			1065 mL	2 mL	604308	04/09/20 05:23	L1A	TAL IRV
Total/NA	Analysis	8081A		1			604563	04/10/20 17:58	D1D	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604382	04/09/20 10:25	EP	TAL IRV
Total Recoverable	Analysis	200.8		20			604474	04/09/20 20:12	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604382	04/09/20 10:25	EP	TAL IRV
Total Recoverable	Analysis	200.8		20			604587	04/10/20 11:24	EMS	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	604644	04/10/20 19:44	KL	TAL IRV

Client Sample ID: SG1-040720-DD
Lab Sample ID: 440-264279-2
Date Collected: 04/07/20 12:30
Matrix: Water
Date Received: 04/07/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1073.5 mL	2 mL	62462	04/10/20 10:11	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM		1			63010	04/14/20 14:58	AJ2Q	ECL 1
Total/NA	Prep	3510C			1072.1 mL	1 mL	62379	04/10/20 07:07	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM CON		1			63040	04/14/20 18:29	AJ2Q	ECL 1
Total/NA	Prep	3510C			1065 mL	2 mL	604308	04/09/20 05:23	L1A	TAL IRV
Total/NA	Analysis	8081A		1			604563	04/10/20 17:32	D1D	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604382	04/09/20 10:25	EP	TAL IRV
Total Recoverable	Analysis	200.8		20			604474	04/09/20 20:14	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604382	04/09/20 10:25	EP	TAL IRV
Total Recoverable	Analysis	200.8		20			604587	04/10/20 11:26	EMS	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	604644	04/10/20 19:44	KL	TAL IRV

Client Sample ID: SG1-040720-EB
Lab Sample ID: 440-264279-3
Date Collected: 04/07/20 11:35
Matrix: Water
Date Received: 04/07/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1050 mL	2 mL	62462	04/10/20 10:11	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM		1			63010	04/14/20 15:20	AJ2Q	ECL 1
Total/NA	Prep	3510C			1044.5 mL	1 mL	62379	04/10/20 07:07	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM CON		1			63040	04/14/20 18:58	AJ2Q	ECL 1
Total/NA	Prep	3510C			1055 mL	2 mL	604308	04/09/20 05:23	L1A	TAL IRV
Total/NA	Analysis	8081A		1			604563	04/10/20 17:06	D1D	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604382	04/09/20 10:25	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			604597	04/10/20 13:54	MQP	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	604644	04/10/20 19:44	KL	TAL IRV

Lab Chronicle

Client: CH2M Hill, Inc.
Job ID: 440-264279-1
Project/Site: KMEP/SFPP Norwalk Site

Client Sample ID: SG1-040720
Lab Sample ID: 440-264279-4
Date Collected: 04/07/20 12:30
Matrix: Water
Date Received: 04/07/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1057.6 mL	2 mL	62462	04/10/20 10:11	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM		1			63010	04/14/20 20:12	AJ2Q	ECL 1
Total/NA	Prep	3510C			1072.7 mL	1 mL	62379	04/10/20 07:07	OAJ3	ECL 1
Total/NA	Analysis	8270C SIM CON		1			63040	04/14/20 19:26	AJ2Q	ECL 1
Total/NA	Prep	3510C			1075 mL	2 mL	604308	04/09/20 05:23	L1A	TAL IRV
Total/NA	Analysis	8081A		1			604563	04/10/20 16:39	D1D	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604382	04/09/20 10:25	EP	TAL IRV
Total Recoverable	Analysis	200.8		20			604474	04/09/20 20:06	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604382	04/09/20 10:25	EP	TAL IRV
Total Recoverable	Analysis	200.8		20			604587	04/10/20 11:18	EMS	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	604678	04/11/20 15:41	KL	TAL IRV

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Method: 8270C SIM - PAHs (GC/MS SIM)

Lab Sample ID: MB 570-62462/1-A
Matrix: Water
Analysis Batch: 63010

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62462

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.011	ug/L		04/10/20 10:11	04/14/20 11:58	1
2-Methylnaphthalene	ND		0.20	0.013	ug/L		04/10/20 10:11	04/14/20 11:58	1
Acenaphthene	ND		0.20	0.013	ug/L		04/10/20 10:11	04/14/20 11:58	1
Acenaphthylene	ND		0.20	0.011	ug/L		04/10/20 10:11	04/14/20 11:58	1
Anthracene	ND		0.20	0.015	ug/L		04/10/20 10:11	04/14/20 11:58	1
Benzo[g,h,i]perylene	ND		0.20	0.021	ug/L		04/10/20 10:11	04/14/20 11:58	1
Benzo[k]fluoranthene	ND		0.20	0.011	ug/L		04/10/20 10:11	04/14/20 11:58	1
Benzo[a]anthracene	ND		0.20	0.013	ug/L		04/10/20 10:11	04/14/20 11:58	1
Benzo[a]pyrene	ND		0.20	0.019	ug/L		04/10/20 10:11	04/14/20 11:58	1
Benzo[b]fluoranthene	ND		0.20	0.023	ug/L		04/10/20 10:11	04/14/20 11:58	1
Chrysene	ND		0.20	0.023	ug/L		04/10/20 10:11	04/14/20 11:58	1
Dibenz(a,h)anthracene	ND		0.20	0.018	ug/L		04/10/20 10:11	04/14/20 11:58	1
Fluoranthene	ND		0.20	0.015	ug/L		04/10/20 10:11	04/14/20 11:58	1
Fluorene	ND		0.20	0.013	ug/L		04/10/20 10:11	04/14/20 11:58	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.022	ug/L		04/10/20 10:11	04/14/20 11:58	1
Naphthalene	ND		0.20	0.014	ug/L		04/10/20 10:11	04/14/20 11:58	1
Phenanthrene	ND		0.20	0.0051	ug/L		04/10/20 10:11	04/14/20 11:58	1
Pyrene	ND		0.20	0.012	ug/L		04/10/20 10:11	04/14/20 11:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*86*		*33 - 144*	*04/10/20 10:11*	*04/14/20 11:58*	*1*
Nitrobenzene-d5 (Surr)	*78*		*28 - 139*	*04/10/20 10:11*	*04/14/20 11:58*	*1*
p-Terphenyl-d14 (Surr)	*82*		*23 - 160*	*04/10/20 10:11*	*04/14/20 11:58*	*1*

Lab Sample ID: LCS 570-62462/2-A
Matrix: Water
Analysis Batch: 63010

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62462

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	2.00	1.59		ug/L		79	20 - 140
2-Methylnaphthalene	2.00	1.62		ug/L		81	21 - 140
Acenaphthene	2.00	1.70		ug/L		85	55 - 121
Acenaphthylene	2.00	1.76		ug/L		88	33 - 145
Anthracene	2.00	1.60		ug/L		80	27 - 133
Benzo[g,h,i]perylene	2.00	1.81		ug/L		90	25 - 157
Benzo[k]fluoranthene	2.00	1.69		ug/L		85	24 - 159
Benzo[a]anthracene	2.00	1.68		ug/L		84	33 - 143
Benzo[a]pyrene	2.00	1.43		ug/L		71	17 - 163
Benzo[b]fluoranthene	2.00	1.71		ug/L		85	24 - 159
Chrysene	2.00	1.71		ug/L		86	17 - 168
Dibenz(a,h)anthracene	2.00	1.73		ug/L		87	25 - 175
Fluoranthene	2.00	1.78		ug/L		89	26 - 137
Fluorene	2.00	1.79		ug/L		89	59 - 121
Indeno[1,2,3-cd]pyrene	2.00	1.68		ug/L		84	25 - 175
Naphthalene	2.00	1.71		ug/L		85	21 - 133
Phenanthrene	2.00	1.76		ug/L		88	54 - 120
Pyrene	2.00	1.73		ug/L		86	45 - 129

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: LCS 570-62462/2-A
Matrix: Water
Analysis Batch: 63010

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62462

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	87		33 - 144
Nitrobenzene-d5 (Surr)	85		28 - 139
p-Terphenyl-d14 (Surr)	76		23 - 160

Lab Sample ID: LCSD 570-62462/3-A
Matrix: Water
Analysis Batch: 63010

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62462

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene			2.00	1.84		ug/L		92	20 - 140	15	25
2-Methylnaphthalene			2.00	1.87		ug/L		93	21 - 140	14	25
Acenaphthene			2.00	1.97		ug/L		98	55 - 121	14	25
Acenaphthylene			2.00	2.05		ug/L		102	33 - 145	15	25
Anthracene			2.00	1.83		ug/L		91	27 - 133	13	25
Benzo[g,h,i]perylene			2.00	1.87		ug/L		94	25 - 157	4	25
Benzo[k]fluoranthene			2.00	1.89		ug/L		94	24 - 159	11	25
Benzo[a]anthracene			2.00	1.91		ug/L		96	33 - 143	13	25
Benzo[a]pyrene			2.00	1.67		ug/L		84	17 - 163	16	25
Benzo[b]fluoranthene			2.00	1.92		ug/L		96	24 - 159	12	25
Chrysene			2.00	1.89		ug/L		95	17 - 168	10	25
Dibenz(a,h)anthracene			2.00	1.80		ug/L		90	25 - 175	4	25
Fluoranthene			2.00	1.98		ug/L		99	26 - 137	11	25
Fluorene			2.00	2.06		ug/L		103	59 - 121	14	25
Indeno[1,2,3-cd]pyrene			2.00	1.77		ug/L		88	25 - 175	5	25
Naphthalene			2.00	1.96		ug/L		98	21 - 133	14	25
Phenanthrene			2.00	1.96		ug/L		98	54 - 120	11	25
Pyrene			2.00	1.97		ug/L		98	45 - 129	13	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	95		33 - 144
Nitrobenzene-d5 (Surr)	95		28 - 139
p-Terphenyl-d14 (Surr)	85		23 - 160

Lab Sample ID: 440-264279-4 MS
Matrix: Water
Analysis Batch: 63010

Client Sample ID: SG1-040720
Prep Type: Total/NA
Prep Batch: 62462

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	0.011	J F2	1.87	1.15		ug/L		61	20 - 140
2-Methylnaphthalene	0.016	J	1.87	1.18		ug/L		62	21 - 140
Acenaphthene	ND	F2	1.87	1.21		ug/L		65	49 - 121
Acenaphthylene	ND	F2	1.87	1.32		ug/L		71	33 - 145
Anthracene	ND		1.87	1.23		ug/L		66	27 - 133
Benzo[g,h,i]perylene	ND		1.87	1.27		ug/L		68	10 - 227
Benzo[k]fluoranthene	ND		1.87	1.26		ug/L		68	24 - 159
Benzo[a]anthracene	ND		1.87	1.20		ug/L		64	33 - 143
Benzo[a]pyrene	ND		1.87	1.10		ug/L		59	17 - 163
Benzo[b]fluoranthene	ND	F2	1.87	1.15		ug/L		62	24 - 159

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: 440-264279-4 MS
Matrix: Water
Analysis Batch: 63010

Client Sample ID: SG1-040720
Prep Type: Total/NA
Prep Batch: 62462

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	ND		1.87	1.22		ug/L		65	17 - 168
Dibenz(a,h)anthracene	ND		1.87	1.22		ug/L		65	10 - 219
Fluoranthene	ND		1.87	1.27		ug/L		68	26 - 137
Fluorene	ND		1.87	1.31		ug/L		70	59 - 121
Indeno[1,2,3-cd]pyrene	ND	F2	1.87	1.17		ug/L		63	10 - 171
Naphthalene	ND		1.87	1.23		ug/L		66	21 - 133
Phenanthrene	0.0057	J	1.87	1.26		ug/L		67	54 - 120
Pyrene	ND		1.87	1.23		ug/L		66	18 - 168

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*63*		*33 - 144*
Nitrobenzene-d5 (Surr)	*61*		*28 - 139*
p-Terphenyl-d14 (Surr)	*58*		*23 - 160*

Lab Sample ID: 440-264279-4 MSD
Matrix: Water
Analysis Batch: 63010

Client Sample ID: SG1-040720
Prep Type: Total/NA
Prep Batch: 62462

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	0.011	J F2	1.87	1.49	F2	ug/L		79	20 - 140	26	25
2-Methylnaphthalene	0.016	J	1.87	1.52		ug/L		81	21 - 140	25	25
Acenaphthene	ND	F2	1.87	1.58	F2	ug/L		84	49 - 121	26	25
Acenaphthylene	ND	F2	1.87	1.70	F2	ug/L		91	33 - 145	26	25
Anthracene	ND		1.87	1.55		ug/L		83	27 - 133	23	25
Benzo[g,h,i]perylene	ND		1.87	1.61		ug/L		86	10 - 227	24	25
Benzo[k]fluoranthene	ND		1.87	1.57		ug/L		84	24 - 159	22	25
Benzo[a]anthracene	ND		1.87	1.51		ug/L		81	33 - 143	22	25
Benzo[a]pyrene	ND		1.87	1.41		ug/L		76	17 - 163	25	25
Benzo[b]fluoranthene	ND	F2	1.87	1.53	F2	ug/L		82	24 - 159	28	25
Chrysene	ND		1.87	1.49		ug/L		80	17 - 168	20	25
Dibenz(a,h)anthracene	ND		1.87	1.57		ug/L		84	10 - 219	25	25
Fluoranthene	ND		1.87	1.58		ug/L		84	26 - 137	21	25
Fluorene	ND		1.87	1.67		ug/L		89	59 - 121	24	25
Indeno[1,2,3-cd]pyrene	ND	F2	1.87	1.53	F2	ug/L		82	10 - 171	26	25
Naphthalene	ND		1.87	1.59		ug/L		85	21 - 133	25	25
Phenanthrene	0.0057	J	1.87	1.58		ug/L		84	54 - 120	22	25
Pyrene	ND		1.87	1.56		ug/L		84	18 - 168	24	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*82*		*33 - 144*
Nitrobenzene-d5 (Surr)	*78*		*28 - 139*
p-Terphenyl-d14 (Surr)	*73*		*23 - 160*

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Lab Sample ID: MB 570-62379/1-A
Matrix: Water
Analysis Batch: 63040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62379

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0040	0.00051	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-18	ND		0.0020	0.00046	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-28	ND		0.0020	0.00053	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-44	ND		0.0020	0.00071	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-52	ND		0.0020	0.00056	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-66	ND		0.0020	0.00040	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-101	ND		0.0020	0.00050	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-105	ND		0.0020	0.00047	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-118	ND		0.0020	0.00050	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-128	ND		0.0020	0.00043	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-132/153	ND		0.0040	0.00069	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-138/158	ND		0.0040	0.00060	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-170	ND		0.0020	0.00042	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-180	ND		0.0020	0.00060	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-187	ND		0.0020	0.00043	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-195	ND		0.0020	0.00075	ug/L		04/10/20 07:06	04/14/20 14:04	1
PCB-206	ND		0.0020	0.00043	ug/L		04/10/20 07:06	04/14/20 14:04	1
Decachlorobiphenyl	ND		0.0020	0.0013	ug/L		04/10/20 07:06	04/14/20 14:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*77*		*50 - 150*	*04/10/20 07:06*	*04/14/20 14:04*	*1*
p-Terphenyl-d14 (Surr)	*98*		*50 - 150*	*04/10/20 07:06*	*04/14/20 14:04*	*1*

Lab Sample ID: LCS 570-62379/2-A
Matrix: Water
Analysis Batch: 63040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62379

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-5/8	0.500	0.366		ug/L		73	50 - 150
PCB-18	0.500	0.278		ug/L		56	50 - 150
PCB-28	0.500	0.365		ug/L		73	50 - 150
PCB-44	0.500	0.334		ug/L		67	50 - 150
PCB-52	0.500	0.361		ug/L		72	50 - 150
PCB-66	0.500	0.342		ug/L		68	50 - 150
PCB-101	0.500	0.332		ug/L		66	50 - 150
PCB-105	0.500	0.330		ug/L		66	50 - 150
PCB-118	0.500	0.324		ug/L		65	50 - 150
PCB-128	0.500	0.388		ug/L		78	50 - 150
PCB-132/153	0.500	0.423		ug/L		85	50 - 150
PCB-138/158	0.500	0.305		ug/L		61	50 - 150
PCB-170	0.500	0.323		ug/L		65	50 - 150
PCB-180	0.500	0.377		ug/L		75	50 - 150
PCB-187	0.500	0.371		ug/L		74	50 - 150
PCB-195	0.500	0.326		ug/L		65	50 - 150
PCB-206	0.500	0.343		ug/L		69	50 - 150
Decachlorobiphenyl	0.500	0.370		ug/L		74	50 - 150

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: LCS 570-62379/2-A
Matrix: Water
Analysis Batch: 63040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62379

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	61		50 - 150
p-Terphenyl-d14 (Surr)	81		50 - 150

Lab Sample ID: LCSD 570-62379/3-A
Matrix: Water
Analysis Batch: 63040

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62379

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8			0.500	0.373		ug/L		75	50 - 150	2	25
PCB-18			0.500	0.303		ug/L		61	50 - 150	8	25
PCB-28			0.500	0.367		ug/L		73	50 - 150	1	25
PCB-44			0.500	0.349		ug/L		70	50 - 150	4	25
PCB-52			0.500	0.357		ug/L		71	50 - 150	1	25
PCB-66			0.500	0.364		ug/L		73	50 - 150	6	25
PCB-101			0.500	0.345		ug/L		69	50 - 150	4	25
PCB-105			0.500	0.330		ug/L		66	50 - 150	0	25
PCB-118			0.500	0.318		ug/L		64	50 - 150	2	25
PCB-128			0.500	0.362		ug/L		72	50 - 150	7	25
PCB-132/153			0.500	0.421		ug/L		84	50 - 150	1	25
PCB-138/158			0.500	0.296		ug/L		59	50 - 150	3	25
PCB-170			0.500	0.315		ug/L		63	50 - 150	3	25
PCB-180			0.500	0.355		ug/L		71	50 - 150	6	25
PCB-187			0.500	0.347		ug/L		69	50 - 150	7	25
PCB-195			0.500	0.323		ug/L		65	50 - 150	1	25
PCB-206			0.500	0.325		ug/L		65	50 - 150	6	25
Decachlorobiphenyl			0.500	0.331		ug/L		66	50 - 150	11	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	63		50 - 150
p-Terphenyl-d14 (Surr)	82		50 - 150

Lab Sample ID: 440-264279-4 MS
Matrix: Water
Analysis Batch: 63040

Client Sample ID: SG1-040720
Prep Type: Total/NA
Prep Batch: 62379

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	77		50 - 150
p-Terphenyl-d14 (Surr)	92		50 - 150

Lab Sample ID: 440-264279-4 MSD
Matrix: Water
Analysis Batch: 63040

Client Sample ID: SG1-040720
Prep Type: Total/NA
Prep Batch: 62379

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	70		50 - 150
p-Terphenyl-d14 (Surr)	95		50 - 150

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 440-604308/1-A
Matrix: Water
Analysis Batch: 604563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 604308

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.0050	0.0025	ug/L		04/09/20 05:23	04/10/20 14:55	1
4,4'-DDT	ND		0.0050	0.0025	ug/L		04/09/20 05:23	04/10/20 14:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*73*		*28 - 108*	*04/09/20 05:23*	*04/10/20 14:55*	*1*
Tetrachloro-m-xylene	*60*		*10 - 123*	*04/09/20 05:23*	*04/10/20 14:55*	*1*

Lab Sample ID: LCS 440-604308/2-A
Matrix: Water
Analysis Batch: 604563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 604308

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4'-DDT	0.400	0.345		ug/L		86	10 - 150
4,4'-DDT	0.400	0.320		ug/L		80	41 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*84*		*28 - 108*
Tetrachloro-m-xylene	*75*		*10 - 123*

Lab Sample ID: 440-264279-4 MS
Matrix: Water
Analysis Batch: 604563

Client Sample ID: SG1-040720
Prep Type: Total/NA
Prep Batch: 604308

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4'-DDT	ND		0.372	0.318		ug/L		86	50 - 125
4,4'-DDT	ND		0.372	0.296		ug/L		80	50 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*78*		*28 - 108*
Tetrachloro-m-xylene	*68*		*10 - 123*

Lab Sample ID: 440-264279-4 MSD
Matrix: Water
Analysis Batch: 604563

Client Sample ID: SG1-040720
Prep Type: Total/NA
Prep Batch: 604308

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4'-DDT	ND		0.383	0.339		ug/L		89	50 - 125	6	30
4,4'-DDT	ND		0.383	0.316		ug/L		83	50 - 125	6	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*77*		*28 - 108*
Tetrachloro-m-xylene	*70*		*10 - 123*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-604382/1-A
Matrix: Water
Analysis Batch: 604474

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 604382

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.50	0.50	ug/L		04/09/20 10:25	04/09/20 18:43	1
Zinc	ND		2.5	2.5	ug/L		04/09/20 10:25	04/09/20 18:43	1

Lab Sample ID: MB 440-604382/1-A
Matrix: Water
Analysis Batch: 604587

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 604382

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.50	0.50	ug/L		04/09/20 10:25	04/10/20 11:14	1

Lab Sample ID: LCS 440-604382/2-A
Matrix: Water
Analysis Batch: 604474

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 604382

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	80.0	76.5		ug/L		96	85 - 115
Zinc	80.0	78.4		ug/L		98	85 - 115

Lab Sample ID: LCS 440-604382/2-A
Matrix: Water
Analysis Batch: 604587

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 604382

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	80.0	76.7		ug/L		96	85 - 115

Lab Sample ID: 440-264279-4 MS
Matrix: Water
Analysis Batch: 604474

Client Sample ID: SG1-040720
Prep Type: Total Recoverable
Prep Batch: 604382

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		80.0	72.7		ug/L		91	70 - 130
Zinc	ND		80.0	76.4		ug/L		95	70 - 130

Lab Sample ID: 440-264279-4 MS
Matrix: Water
Analysis Batch: 604587

Client Sample ID: SG1-040720
Prep Type: Total Recoverable
Prep Batch: 604382

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	ND		80.0	74.4		ug/L		93	70 - 130

Lab Sample ID: 440-264279-4 MSD
Matrix: Water
Analysis Batch: 604474

Client Sample ID: SG1-040720
Prep Type: Total Recoverable
Prep Batch: 604382

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	ND		80.0	73.5		ug/L		92	70 - 130	1	20
Zinc	ND		80.0	79.5		ug/L		99	70 - 130	4	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-264279-4 MSD
Matrix: Water
Analysis Batch: 604587

Client Sample ID: SG1-040720
Prep Type: Total Recoverable
Prep Batch: 604382

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	ND		80.0	80.2		ug/L		100	70 - 130	7	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-604644/1
Matrix: Water
Analysis Batch: 604644

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			04/10/20 19:44	1

Lab Sample ID: LCS 440-604644/2
Matrix: Water
Analysis Batch: 604644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	998		mg/L		100	85 - 115

Lab Sample ID: 440-264119-H-8 DU
Matrix: Water
Analysis Batch: 604644

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	230		214		mg/L		7	10

Lab Sample ID: MB 440-604678/1
Matrix: Water
Analysis Batch: 604678

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			04/11/20 15:41	1

Lab Sample ID: LCS 440-604678/2
Matrix: Water
Analysis Batch: 604678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	1020		mg/L		102	85 - 115

Lab Sample ID: 440-264279-4 DU
Matrix: Water
Analysis Batch: 604678

Client Sample ID: SG1-040720
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	11		10.0		mg/L		10	10

QC Association Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-264279-1

GC/MS Semi VOA

Prep Batch: 62379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total/NA	Water	3510C	
440-264279-2	SG1-040720-DD	Total/NA	Water	3510C	
440-264279-3	SG1-040720-EB	Total/NA	Water	3510C	
440-264279-4	SG1-040720	Total/NA	Water	3510C	
MB 570-62379/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-62379/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-62379/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-264279-4 MS	SG1-040720	Total/NA	Water	3510C	
440-264279-4 MSD	SG1-040720	Total/NA	Water	3510C	

Prep Batch: 62462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total/NA	Water	3510C	
440-264279-2	SG1-040720-DD	Total/NA	Water	3510C	
440-264279-3	SG1-040720-EB	Total/NA	Water	3510C	
440-264279-4	SG1-040720	Total/NA	Water	3510C	
MB 570-62462/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-62462/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-62462/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-264279-4 MS	SG1-040720	Total/NA	Water	3510C	
440-264279-4 MSD	SG1-040720	Total/NA	Water	3510C	

Analysis Batch: 63010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total/NA	Water	8270C SIM	62462
440-264279-2	SG1-040720-DD	Total/NA	Water	8270C SIM	62462
440-264279-3	SG1-040720-EB	Total/NA	Water	8270C SIM	62462
440-264279-4	SG1-040720	Total/NA	Water	8270C SIM	62462
MB 570-62462/1-A	Method Blank	Total/NA	Water	8270C SIM	62462
LCS 570-62462/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	62462
LCSD 570-62462/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	62462
440-264279-4 MS	SG1-040720	Total/NA	Water	8270C SIM	62462
440-264279-4 MSD	SG1-040720	Total/NA	Water	8270C SIM	62462

Analysis Batch: 63040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total/NA	Water	8270C SIM CON	62379
440-264279-2	SG1-040720-DD	Total/NA	Water	8270C SIM CON	62379
440-264279-3	SG1-040720-EB	Total/NA	Water	8270C SIM CON	62379
440-264279-4	SG1-040720	Total/NA	Water	8270C SIM CON	62379
MB 570-62379/1-A	Method Blank	Total/NA	Water	8270C SIM CON	62379
LCS 570-62379/2-A	Lab Control Sample	Total/NA	Water	8270C SIM CON	62379
LCSD 570-62379/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM CON	62379
440-264279-4 MS	SG1-040720	Total/NA	Water	8270C SIM CON	62379
440-264279-4 MSD	SG1-040720	Total/NA	Water	8270C SIM CON	62379

GC Semi VOA

Prep Batch: 604308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total/NA	Water	3510C	

GC Semi VOA (Continued)

Prep Batch: 604308 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-2	SG1-040720-DD	Total/NA	Water	3510C	
440-264279-3	SG1-040720-EB	Total/NA	Water	3510C	
440-264279-4	SG1-040720	Total/NA	Water	3510C	
MB 440-604308/1-A	Method Blank	Total/NA	Water	3510C	
LCS 440-604308/2-A	Lab Control Sample	Total/NA	Water	3510C	
440-264279-4 MS	SG1-040720	Total/NA	Water	3510C	
440-264279-4 MSD	SG1-040720	Total/NA	Water	3510C	

Analysis Batch: 604563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total/NA	Water	8081A	604308
440-264279-2	SG1-040720-DD	Total/NA	Water	8081A	604308
440-264279-3	SG1-040720-EB	Total/NA	Water	8081A	604308
440-264279-4	SG1-040720	Total/NA	Water	8081A	604308
MB 440-604308/1-A	Method Blank	Total/NA	Water	8081A	604308
LCS 440-604308/2-A	Lab Control Sample	Total/NA	Water	8081A	604308
440-264279-4 MS	SG1-040720	Total/NA	Water	8081A	604308
440-264279-4 MSD	SG1-040720	Total/NA	Water	8081A	604308

Metals

Prep Batch: 604382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total Recoverable	Water	200.2	
440-264279-2	SG1-040720-DD	Total Recoverable	Water	200.2	
440-264279-3	SG1-040720-EB	Total Recoverable	Water	200.2	
440-264279-4	SG1-040720	Total Recoverable	Water	200.2	
MB 440-604382/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-604382/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-264279-4 MS	SG1-040720	Total Recoverable	Water	200.2	
440-264279-4 MSD	SG1-040720	Total Recoverable	Water	200.2	

Analysis Batch: 604474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total Recoverable	Water	200.8	604382
440-264279-2	SG1-040720-DD	Total Recoverable	Water	200.8	604382
440-264279-4	SG1-040720	Total Recoverable	Water	200.8	604382
MB 440-604382/1-A	Method Blank	Total Recoverable	Water	200.8	604382
LCS 440-604382/2-A	Lab Control Sample	Total Recoverable	Water	200.8	604382
440-264279-4 MS	SG1-040720	Total Recoverable	Water	200.8	604382
440-264279-4 MSD	SG1-040720	Total Recoverable	Water	200.8	604382

Analysis Batch: 604587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total Recoverable	Water	200.8	604382
440-264279-2	SG1-040720-DD	Total Recoverable	Water	200.8	604382
440-264279-4	SG1-040720	Total Recoverable	Water	200.8	604382
MB 440-604382/1-A	Method Blank	Total Recoverable	Water	200.8	604382
LCS 440-604382/2-A	Lab Control Sample	Total Recoverable	Water	200.8	604382
440-264279-4 MS	SG1-040720	Total Recoverable	Water	200.8	604382
440-264279-4 MSD	SG1-040720	Total Recoverable	Water	200.8	604382

QC Association Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-264279-1

Metals

Analysis Batch: 604597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-3	SG1-040720-EB	Total Recoverable	Water	200.8	604382

General Chemistry

Analysis Batch: 604644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-1	SG1-040720-DW	Total/NA	Water	SM 2540D	
440-264279-2	SG1-040720-DD	Total/NA	Water	SM 2540D	
440-264279-3	SG1-040720-EB	Total/NA	Water	SM 2540D	
MB 440-604644/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-604644/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-264119-H-8 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 604678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264279-4	SG1-040720	Total/NA	Water	SM 2540D	
MB 440-604678/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-604678/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-264279-4 DU	SG1-040720	Total/NA	Water	SM 2540D	

Definitions/Glossary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-264279-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: CH2M Hill, Inc.
Job ID: 440-264279-1
Project/Site: KMEP/SFPP Norwalk Site

Laboratory: Eurofins Calscience Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska	State	CA01531	06-30-20
Arizona	State	AZ0671	10-14-20
California	Los Angeles County Sanitation Districts	10256	06-30-20
California	State	2706	06-30-20
Guam	State	20-004R	01-23-21
Hawaii	State	CA01531	01-29-21
Kansas	NELAP	E-10420	07-31-20
Nevada	State	CA015312020-8	07-31-20
Nevada	State	CA015312020-8	07-31-20
Oregon	NELAP	4028 - 007	04-12-20
USDA	US Federal Programs	P330-18-00214	07-09-21
Washington	State	C900	09-03-20

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

4/8/20 LD

TestAmerica Laboratories

440-264279 Chain of Custody

CHAIN OF CUSTODY RECORD

DATE: April 7, 2020
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: Ryan Koch	Report To	Eric Davis	Attention	Ryan Koch - Ref. AFE# 81195	Sampler Name	Nils Orliczky
Address	1001 Louisiana St., Houston, TX 77002	Copy To	Ryan Koch	Company Name	Kinder Morgan Energy Partners	Sampler Signature	
Email To		Purchase Order No		Address	1001 Louisiana St , Houston, TX 77002	Sample Date	4-7-20
Phone 713-420-6730	Fax 714-560-4801	Project Name	SFPP Norwalk	TA Project Manager	Janice Hsu		

| Section E Required Sample Information | | |

Eurofins Calscience Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone: 949-261-1022 Fax: 949-260-3297

Chain of Custody Record

eurofins | Calscience

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hsu, Janice	Carrier Tracking No(s):	COC No: 440-154849.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: janice.hsu@testamericainc.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Calscience LLC		Accreditations Required (See note):		Job #: 440-264279-1
Address: 7440 Lincoln Way,	Due Date Requested: 4/20/2020	Analysis Requested		Preservation Codes:
City: Garden Grove	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: CA, 92841				
Phone: 714-895-5494(Tel) 714-894-7501(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: KMEP/SFPP Norwalk Site	Project #: 44011238			
Site: KMEP Norwalk Airs	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270C_SIM_PAH/3510C SIM PAH	8270C_SIM_CON/3510C (MOD) SIM Congeners	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SG1-040720-DW (440-264279-1)	4/7/20	12:30 Pacific		Water			X	X	2	
SG1-040720-DD (440-264279-2)	4/7/20	12:30 Pacific		Water			X	X	2	
SG1-040720-EB (440-264279-3)	4/7/20	11:35 Pacific		Water			X	X	2	
SG1-040720 (440-264279-4)	4/7/20	12:30 Pacific		Water			X	X	2	
SG1-040720 (440-264279-4MS)	4/7/20	12:30 Pacific	MS	Water			X	X	2	
SG1-040720 (440-264279-4MSD)	4/7/20	12:30 Pacific	MSD	Water			X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	4-9-20 8:40	EC FRL		4/9/20 0840	EC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3-6 / 2-7 SCG

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 440-264279-1

Login Number: 264279
List Number: 1
Creator: Dolidze, Lado

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 440-264279-1

Login Number: 264279
List Number: 2
Creator: Liao, Gineyau

List Source: Eurofins Calscience
List Creation: 04/09/20 06:22 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

SWAMP Field Data Sheet (Water Chemistry & Discrete Probe) - EventType=WQ

Entered in d-base (initial/date) | Pg 1 of 1 Pgs

*StationID: SFPP NORWALK PUMP STATION | *Date (mm/dd/yyyy): 09/30/2020 | *Group: NA | *Agency: Jacobs Engineering

*Funding: | ArrivalTime: 0900 | DepartureTime: 1150 | *SampleTime (1st sample): | *Protocol:

*ProjectCode: | *Personnel: N. Orliczky / D. Hill | *Purpose (circle applicable): WaterChem WaterTox Habitat FieldMeas | *PurposeFailure:

*Location: Bank Thalweg Midchannel OpenWater | *GPS/DGPS | Lat (dd.ddddd) | Long (ddd.ddddd) | OCCUPATION METHOD: Walk-in Bridge R/V _____ Other

GPS Device: Google Earth | Target: | 33.74821 | -118.112072 | STARTING BANK (facing downstream): LB RB NA

Datum: NAD83 | Accuracy (ft / m): 1.59m | *Actual: | 33.747027 | -118.113248 | Point of Sample (if Integrated, then -88 in dbase)

Habitat Observations (CollectionMethod = Habitat_generic)

WADEABILITY: Y / N / Unk | BEAUFORT SCALE (see attachment): 1 | DISTANCE FROM BANK (m): 49 | STREAM WIDTH (m): 109 | WATER DEPTH (m): 12.1

SITE ODOR: None, Sulfides, Sewage, Petroleum, Smoke, Other_____

SKY CODE: Clear, Partly Cloudy, Overcast, Fog, Smoky, Hazy

WIND DIRECTION (from): N

HYDROMODIFICATION: None, Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other NA | LOCATION (to sample): US / DS / WI /

OTHER PRESENCE: Vascular, Nonvascular, OilySheen, Foam, Trash, Other_____

DOMINANT SUBSTRATE: Bedrock, Concrete, Cobble, Boulder, Gravel, Sand, Mud, Unk, Other_____

PHOTOS (RB & LB assigned when facing downstream; RENAME to StationCode_yyyy_mm_dd_uniquecode): 1: (RB / LB / BB / US / DS / ##)

WATERCLARITY: Clear (see bottom), Cloudy (>4" vis), Murky (<4" vis) | PRECIPITATION: None, Fog, Drizzle, Rain, Snow | 2: (RB / LB / BB / US / DS / ##)

WATERODOR: None, Sulfides, Sewage, Petroleum, Mixed, Other_____ | PRECIPITATION (last 24 hrs): Unknown, <1", >1" None

WATERCOLOR: Colorless, Green, Yellow, Brown | EVIDENCE OF FIRES: No, <1 year, <5 years | 3: (RB / LB / BB / US / DS / ##)

OVERLAND RUNOFF (Last 24 hrs): none, light, moderate / heavy, unknown

OBSERVED FLOW: NA, Dry Waterbody Bed, No Obs Flow, Isolated Pool, Trickle (<0.1cfs), 0.1-1cfs, 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, >200cfs

Field Measurements (SampleType = FieldMeasure; Method = Field)

	DepthCollec (m)	Velocity (fps)	Air Temp (°C)	Water Temp (°C)	pH	DO (mg/L)	DO (%)	Specific Conductivity (uS/cm)	Salinity (ppt)	Turbidity (ntu)
SUBSURF/MID/ BOTTOM/REP	1	0.4	19.4	23.7	7.49	6.10	80.7	45.5	29.4	0.0
SUBSURF/MID/ BOTTOM/REP										
SUBSURF/MID/ BOTTOM/REP										
Instrument:	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-52	Horiba U-52	--	Horiba U-52 →		
Calib. Date:	9/28/20 →						--	9/28/20 →		

Samples Taken (# of containers filled) - Method=Water_Grab

Field Dup YES / NO: (SampleType = Grab / Integrated; LABEL_ID = FieldQA; create collection record upon data entry

SAMPLE TYPE: Grab / Integrated | COLLECTION DEVICE: Indiv bottle (by hand, by pole, by bucket); Teflon tubing; Kemmer; Pole & Beaker; Other _____

	DepthCollec (m)	Inorganics	Bacteria	Chl a	TSS / SSC	TOC / DOC	Total Hg	Dissolved Mercury	Total Metals	Dissolved Metals	Organics	Toxicity	VOAs
Sub/Surface	0.2	3			2				1		2		
Sub/Surface													

COMMENTS:

Tide appears to be coming in, surface water flowing in from ocean. Secchi disc not visible at 9.5 feet below water level.

~~Depth to Bottom~~ DTW = 13.4'

Modified 02/10/1

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ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-272545-1
Client Project/Site: KMEP/SFPP Norwalk Site

For:
CH2M Hill, Inc.
6 Hutton Centre Drive, Suite 700
Santa Ana, California 92707

Attn: Eric Davis

Authorized for release by:
10/13/2020 3:46:36 PM

Janice Hsu, Project Manager I
(949)260-3263
Janice.Hsu@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Sample Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-272545-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-272545-1	SG1-093020-DW	Water	09/30/20 10:40	09/30/20 12:55	
440-272545-2	SG1-093020-DD	Water	09/30/20 10:45	09/30/20 12:55	
440-272545-3	SG1-093020-EB	Water	09/30/20 10:20	09/30/20 12:55	

Job ID: 440-272545-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative
440-272545-1

Comments
No additional comments.

Receipt
The samples were received on 9/30/2020 12:55 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 4.2º C, 4.3º C and 4.6º C.

GC/MS Semi VOA
Method 8270C SIM CON: The continuing calibration verification (CCV) associated with batch 570-98998 recovered above the upper control limit for DCB Decachlorobiphenyl. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270C SIM CON: Surrogate recovery for the following sample was outside control limits: SG1-093020-DW (440-272545-1). Re-extraction and/or re-analysis was performed and surrogate recovery was outside control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8081A: The continuing calibration verification (CCV) associated with batch 570-98819 recovered above the upper control limit for 4,4'-DDD. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 200.8: The following samples were diluted due to the nature of the sample matrix: SG1-093020-DW (440-272545-1), SG1-093020-DD (440-272545-2) and SG1-093020-EB (440-272545-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C: The following sample was re-prepared outside of preparation holding time due to low surrogate SG1-093020-DW (440-272545-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-272545-1

Client Sample ID: SG1-093020-DW

Date Collected: 09/30/20 10:40
Date Received: 09/30/20 12:55

Lab Sample ID: 440-272545-1

Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0038	0.00048	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-18	ND		0.0019	0.00043	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-28	ND		0.0019	0.00049	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-44	ND		0.0019	0.00067	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-52	ND		0.0019	0.00052	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-66	ND		0.0019	0.00038	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-101	ND		0.0019	0.00047	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-105	ND		0.0019	0.00044	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-118	ND		0.0019	0.00047	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-128	ND		0.0019	0.00041	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-132/153	ND		0.0038	0.00065	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-138/158	ND	F1	0.0038	0.00056	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-170	ND		0.0019	0.00040	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-180	ND		0.0019	0.00056	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-187	ND		0.0019	0.00040	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-195	ND		0.0019	0.00070	ug/L		10/08/20 13:15	10/12/20 15:05	1
PCB-206	ND		0.0019	0.00040	ug/L		10/08/20 13:15	10/12/20 15:05	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		10/08/20 13:15	10/12/20 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*39*	*X*	*50 - 150*	*10/08/20 13:15*	*10/12/20 15:05*	*1*
p-Terphenyl-d14 (Surr)	*60*		*50 - 150*	*10/08/20 13:15*	*10/12/20 15:05*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.011	ug/L		10/02/20 13:05	10/03/20 16:31	1
2-Methylnaphthalene	ND		0.20	0.013	ug/L		10/02/20 13:05	10/03/20 16:31	1
Acenaphthene	ND		0.20	0.014	ug/L		10/02/20 13:05	10/03/20 16:31	1
Acenaphthylene	ND		0.20	0.011	ug/L		10/02/20 13:05	10/03/20 16:31	1
Anthracene	ND		0.20	0.015	ug/L		10/02/20 13:05	10/03/20 16:31	1
Benzo[g,h,i]perylene	ND		0.20	0.022	ug/L		10/02/20 13:05	10/03/20 16:31	1
Benzo[k]fluoranthene	ND		0.20	0.011	ug/L		10/02/20 13:05	10/03/20 16:31	1
Benzo[a]anthracene	ND		0.20	0.013	ug/L		10/02/20 13:05	10/03/20 16:31	1
Benzo[a]pyrene	ND		0.20	0.019	ug/L		10/02/20 13:05	10/03/20 16:31	1
Benzo[b]fluoranthene	ND		0.20	0.023	ug/L		10/02/20 13:05	10/03/20 16:31	1
Chrysene	ND		0.20	0.023	ug/L		10/02/20 13:05	10/03/20 16:31	1
Dibenz(a,h)anthracene	ND		0.20	0.018	ug/L		10/02/20 13:05	10/03/20 16:31	1
Fluoranthene	ND		0.20	0.015	ug/L		10/02/20 13:05	10/03/20 16:31	1
Fluorene	ND		0.20	0.013	ug/L		10/02/20 13:05	10/03/20 16:31	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.022	ug/L		10/02/20 13:05	10/03/20 16:31	1
Naphthalene	ND		0.20	0.014	ug/L		10/02/20 13:05	10/03/20 16:31	1
Phenanthrene	ND		0.20	0.0052	ug/L		10/02/20 13:05	10/03/20 16:31	1
Pyrene	ND		0.20	0.013	ug/L		10/02/20 13:05	10/03/20 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*33 - 144*	*10/02/20 13:05*	*10/03/20 16:31*	*1*
Nitrobenzene-d5 (Surr)	*55*		*28 - 139*	*10/02/20 13:05*	*10/03/20 16:31*	*1*
p-Terphenyl-d14 (Surr)	*78*		*23 - 160*	*10/02/20 13:05*	*10/03/20 16:31*	*1*

Client Sample ID: SG1-093020-DW

Date Collected: 09/30/20 10:40
Date Received: 09/30/20 12:55

Lab Sample ID: 440-272545-1
Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	ND		0.0094	0.0049	ug/L		10/01/20 19:30	10/03/20 05:10	1
2,4'-DDT	ND		0.0038	0.0016	ug/L		10/01/20 19:30	10/03/20 05:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*20 - 139*	*10/01/20 19:30*	*10/03/20 05:10*	*1*
DCB Decachlorobiphenyl (Surr)	*62*		*20 - 154*	*10/01/20 19:30*	*10/03/20 05:10*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		10	10	ug/L		10/02/20 11:00	10/02/20 17:23	20
Lead	ND		10	10	ug/L		10/02/20 11:00	10/02/20 17:23	20
Zinc	ND		50	50	ug/L		10/02/20 11:00	10/02/20 17:23	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**12**		1.0	0.50	mg/L			10/01/20 14:39	1

Client Sample ID: SG1-093020-DD

Date Collected: 09/30/20 10:45
Date Received: 09/30/20 12:55

Lab Sample ID: 440-272545-2
Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0046	0.00059	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-18	ND		0.0023	0.00053	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-28	ND		0.0023	0.00061	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-44	ND		0.0023	0.00082	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-52	ND		0.0023	0.00064	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-66	ND		0.0023	0.00046	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-101	ND		0.0023	0.00057	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-105	ND		0.0023	0.00054	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-118	ND		0.0023	0.00057	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-128	ND		0.0023	0.00050	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-132/153	ND		0.0046	0.00080	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-138/158	ND		0.0046	0.00068	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-170	ND		0.0023	0.00048	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-180	ND		0.0023	0.00069	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-187	ND		0.0023	0.00049	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-195	ND		0.0023	0.00086	ug/L		10/01/20 15:12	10/02/20 20:01	1
PCB-206	ND		0.0023	0.00049	ug/L		10/01/20 15:12	10/02/20 20:01	1
Decachlorobiphenyl	ND		0.0023	0.0015	ug/L		10/01/20 15:12	10/02/20 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*61*		*50 - 150*	*10/01/20 15:12*	*10/02/20 20:01*	*1*
p-Terphenyl-d14 (Surr)	*101*		*50 - 150*	*10/01/20 15:12*	*10/02/20 20:01*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.19	0.010	ug/L		10/02/20 13:05	10/03/20 16:51	1
2-Methylnaphthalene	ND		0.19	0.013	ug/L		10/02/20 13:05	10/03/20 16:51	1
Acenaphthene	ND		0.19	0.013	ug/L		10/02/20 13:05	10/03/20 16:51	1

Client Sample ID: SG1-093020-DD
Lab Sample ID: 440-272545-2
Date Collected: 09/30/20 10:45
Matrix: Water
Date Received: 09/30/20 12:55

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.19	0.010	ug/L		10/02/20 13:05	10/03/20 16:51	1
Anthracene	ND		0.19	0.014	ug/L		10/02/20 13:05	10/03/20 16:51	1
Benzo[g,h,i]perylene	ND		0.19	0.021	ug/L		10/02/20 13:05	10/03/20 16:51	1
Benzo[k]fluoranthene	ND		0.19	0.010	ug/L		10/02/20 13:05	10/03/20 16:51	1
Benzo[a]anthracene	ND		0.19	0.013	ug/L		10/02/20 13:05	10/03/20 16:51	1
Benzo[a]pyrene	ND		0.19	0.018	ug/L		10/02/20 13:05	10/03/20 16:51	1
Benzo[b]fluoranthene	ND		0.19	0.022	ug/L		10/02/20 13:05	10/03/20 16:51	1
Chrysene	ND		0.19	0.022	ug/L		10/02/20 13:05	10/03/20 16:51	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		10/02/20 13:05	10/03/20 16:51	1
Fluoranthene	ND		0.19	0.014	ug/L		10/02/20 13:05	10/03/20 16:51	1
Fluorene	ND		0.19	0.012	ug/L		10/02/20 13:05	10/03/20 16:51	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.021	ug/L		10/02/20 13:05	10/03/20 16:51	1
Naphthalene	ND		0.19	0.013	ug/L		10/02/20 13:05	10/03/20 16:51	1
Phenanthrene	ND		0.19	0.0050	ug/L		10/02/20 13:05	10/03/20 16:51	1
Pyrene	ND		0.19	0.012	ug/L		10/02/20 13:05	10/03/20 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*70*		*33 - 144*	*10/02/20 13:05*	*10/03/20 16:51*	*1*
Nitrobenzene-d5 (Surr)	*50*		*28 - 139*	*10/02/20 13:05*	*10/03/20 16:51*	*1*
p-Terphenyl-d14 (Surr)	*79*		*23 - 160*	*10/02/20 13:05*	*10/03/20 16:51*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	ND		0.0093	0.0048	ug/L		10/01/20 19:30	10/03/20 05:24	1
2,4'-DDT	ND		0.0037	0.0016	ug/L		10/01/20 19:30	10/03/20 05:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*20 - 139*	*10/01/20 19:30*	*10/03/20 05:24*	*1*
DCB Decachlorobiphenyl (Surr)	*67*		*20 - 154*	*10/01/20 19:30*	*10/03/20 05:24*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		10	10	ug/L		10/02/20 11:00	10/02/20 17:46	20
Lead	ND		10	10	ug/L		10/02/20 11:00	10/02/20 17:46	20
Zinc	ND		50	50	ug/L		10/02/20 11:00	10/02/20 17:46	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**5.2**		1.0	0.50	mg/L			10/01/20 14:39	1

Client Sample ID: SG1-093020-EB
Lab Sample ID: 440-272545-3
Date Collected: 09/30/20 10:20
Matrix: Water
Date Received: 09/30/20 12:55

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0038	0.00049	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-18	ND		0.0019	0.00044	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-28	ND		0.0019	0.00050	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-44	ND		0.0019	0.00068	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-52	ND		0.0019	0.00053	ug/L		10/01/20 15:12	10/02/20 20:24	1

Client Sample ID: SG1-093020-EB
Date Collected: 09/30/20 10:20
Date Received: 09/30/20 12:55

Lab Sample ID: 440-272545-3
Matrix: Water

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-66	ND		0.0019	0.00038	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-101	ND		0.0019	0.00047	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-105	ND		0.0019	0.00044	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-118	ND		0.0019	0.00047	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-128	ND		0.0019	0.00041	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-132/153	ND		0.0038	0.00066	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-138/158	ND		0.0038	0.00057	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-170	ND		0.0019	0.00040	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-180	ND		0.0019	0.00057	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-187	ND		0.0019	0.00041	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-195	ND		0.0019	0.00071	ug/L		10/01/20 15:12	10/02/20 20:24	1
PCB-206	ND		0.0019	0.00041	ug/L		10/01/20 15:12	10/02/20 20:24	1
Decachlorobiphenyl	ND		0.0019	0.0012	ug/L		10/01/20 15:12	10/02/20 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*56*		*50 - 150*	*10/01/20 15:12*	*10/02/20 20:24*	*1*
p-Terphenyl-d14 (Surr)	*94*		*50 - 150*	*10/01/20 15:12*	*10/02/20 20:24*	*1*

Method: 8270C SIM - PAHs (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.19	0.010	ug/L		10/02/20 13:05	10/03/20 17:10	1
2-Methylnaphthalene	ND		0.19	0.013	ug/L		10/02/20 13:05	10/03/20 17:10	1
Acenaphthene	ND		0.19	0.013	ug/L		10/02/20 13:05	10/03/20 17:10	1
Acenaphthylene	ND		0.19	0.010	ug/L		10/02/20 13:05	10/03/20 17:10	1
Anthracene	ND		0.19	0.014	ug/L		10/02/20 13:05	10/03/20 17:10	1
Benzo[g,h,i]perylene	ND		0.19	0.021	ug/L		10/02/20 13:05	10/03/20 17:10	1
Benzo[k]fluoranthene	ND		0.19	0.010	ug/L		10/02/20 13:05	10/03/20 17:10	1
Benzo[a]anthracene	ND		0.19	0.013	ug/L		10/02/20 13:05	10/03/20 17:10	1
Benzo[a]pyrene	ND		0.19	0.018	ug/L		10/02/20 13:05	10/03/20 17:10	1
Benzo[b]fluoranthene	ND		0.19	0.022	ug/L		10/02/20 13:05	10/03/20 17:10	1
Chrysene	ND		0.19	0.022	ug/L		10/02/20 13:05	10/03/20 17:10	1
Dibenz(a,h)anthracene	ND		0.19	0.017	ug/L		10/02/20 13:05	10/03/20 17:10	1
Fluoranthene	ND		0.19	0.014	ug/L		10/02/20 13:05	10/03/20 17:10	1
Fluorene	ND		0.19	0.012	ug/L		10/02/20 13:05	10/03/20 17:10	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.021	ug/L		10/02/20 13:05	10/03/20 17:10	1
Naphthalene	ND		0.19	0.013	ug/L		10/02/20 13:05	10/03/20 17:10	1
Phenanthrene	ND		0.19	0.0049	ug/L		10/02/20 13:05	10/03/20 17:10	1
Pyrene	ND		0.19	0.012	ug/L		10/02/20 13:05	10/03/20 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*33 - 144*	*10/02/20 13:05*	*10/03/20 17:10*	*1*
Nitrobenzene-d5 (Surr)	*66*		*28 - 139*	*10/02/20 13:05*	*10/03/20 17:10*	*1*
p-Terphenyl-d14 (Surr)	*81*		*23 - 160*	*10/02/20 13:05*	*10/03/20 17:10*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	ND		0.010	0.0052	ug/L		10/01/20 19:30	10/03/20 05:39	1
2,4'-DDT	ND		0.0040	0.0017	ug/L		10/01/20 19:30	10/03/20 05:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*20 - 139*	*10/01/20 19:30*	*10/03/20 05:39*	*1*

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-272545-1

Client Sample ID: SG1-093020-EB

Date Collected: 09/30/20 10:20
Date Received: 09/30/20 12:55

Lab Sample ID: 440-272545-3

Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*59*		*20 - 154*	*10/01/20 19:30*	*10/03/20 05:39*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		10	10	ug/L		10/02/20 11:00	10/02/20 17:48	20
Lead	ND		10	10	ug/L		10/02/20 11:00	10/02/20 17:48	20
Zinc	ND		50	50	ug/L		10/02/20 11:00	10/02/20 17:48	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			10/01/20 14:39	1

Method Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-272545-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs (GC/MS SIM)	SW846	ECL 1
8270C SIM CON	PCB Congeners (GC/MS)	SW846	ECL 1
8081A	Organochlorine Pesticides (GC)	SW846	ECL 1
200.8	Metals (ICP/MS)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ECL 1

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: CH2M Hill, Inc.
Job ID: 440-272545-1
Project/Site: KMEP/SFPP Norwalk Site

Client Sample ID: SG1-093020-DW
Lab Sample ID: 440-272545-1
Date Collected: 09/30/20 10:40
Matrix: Water
Date Received: 09/30/20 12:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			986.4 mL	2 mL	99031	10/02/20 13:05	SAL	ECL 1
Total/NA	Analysis	8270C SIM		1			99274	10/03/20 16:31	AJ2Q	ECL 1
Total/NA	Prep	3510C			1066.3 mL	1 mL	100412	10/08/20 13:15	SAL	ECL 1
Total/NA	Analysis	8270C SIM CON		1			101117	10/12/20 15:05	AJ2Q	ECL 1
Total/NA	Prep	3510C			1066.4 mL	1 mL	98827	10/01/20 19:30	SAL	ECL 1
Total/NA	Analysis	8081A		1			98819	10/03/20 05:10	UHHN	ECL 1
Total Recoverable	Prep	200.2			25 mL	25 mL	626473	10/02/20 11:00	M1G	TAL IRV
Total Recoverable	Analysis	200.8		20			626532	10/02/20 17:23	MQP	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	626393	10/01/20 14:39	HTL	TAL IRV

Client Sample ID: SG1-093020-DD
Lab Sample ID: 440-272545-2
Date Collected: 09/30/20 10:45
Matrix: Water
Date Received: 09/30/20 12:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1030 mL	2 mL	99031	10/02/20 13:05	SAL	ECL 1
Total/NA	Analysis	8270C SIM		1			99274	10/03/20 16:51	AJ2Q	ECL 1
Total/NA	Prep	3510C			870.5 mL	1 mL	98750	10/01/20 15:12	SAL	ECL 1
Total/NA	Analysis	8270C SIM CON		1			98998	10/02/20 20:01	AJ2Q	ECL 1
Total/NA	Prep	3510C			1073.8 mL	1 mL	98827	10/01/20 19:30	SAL	ECL 1
Total/NA	Analysis	8081A		1			98819	10/03/20 05:24	UHHN	ECL 1
Total Recoverable	Prep	200.2			25 mL	25 mL	626473	10/02/20 11:00	M1G	TAL IRV
Total Recoverable	Analysis	200.8		20			626532	10/02/20 17:46	MQP	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	626393	10/01/20 14:39	HTL	TAL IRV

Client Sample ID: SG1-093020-EB
Lab Sample ID: 440-272545-3
Date Collected: 09/30/20 10:20
Matrix: Water
Date Received: 09/30/20 12:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1039 mL	2 mL	99031	10/02/20 13:05	SAL	ECL 1
Total/NA	Analysis	8270C SIM		1			99274	10/03/20 17:10	AJ2Q	ECL 1
Total/NA	Prep	3510C			1050.6 mL	1 mL	98750	10/01/20 15:12	SAL	ECL 1
Total/NA	Analysis	8270C SIM CON		1			98998	10/02/20 20:24	AJ2Q	ECL 1
Total/NA	Prep	3510C			996 mL	1 mL	98827	10/01/20 19:30	SAL	ECL 1
Total/NA	Analysis	8081A		1			98819	10/03/20 05:39	UHHN	ECL 1
Total Recoverable	Prep	200.2			25 mL	25 mL	626473	10/02/20 11:00	M1G	TAL IRV
Total Recoverable	Analysis	200.8		20			626532	10/02/20 17:48	MQP	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	626393	10/01/20 14:39	HTL	TAL IRV

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Method: 8270C SIM - PAHs (GC/MS SIM)

Lab Sample ID: MB 570-99031/1-A
Matrix: Water
Analysis Batch: 99274

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 99031

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.011	ug/L		10/02/20 13:05	10/03/20 15:32	1
2-Methylnaphthalene	ND		0.20	0.013	ug/L		10/02/20 13:05	10/03/20 15:32	1
Acenaphthene	ND		0.20	0.013	ug/L		10/02/20 13:05	10/03/20 15:32	1
Acenaphthylene	ND		0.20	0.011	ug/L		10/02/20 13:05	10/03/20 15:32	1
Anthracene	ND		0.20	0.015	ug/L		10/02/20 13:05	10/03/20 15:32	1
Benzo[g,h,i]perylene	ND		0.20	0.021	ug/L		10/02/20 13:05	10/03/20 15:32	1
Benzo[k]fluoranthene	ND		0.20	0.011	ug/L		10/02/20 13:05	10/03/20 15:32	1
Benzo[a]anthracene	ND		0.20	0.013	ug/L		10/02/20 13:05	10/03/20 15:32	1
Benzo[a]pyrene	ND		0.20	0.019	ug/L		10/02/20 13:05	10/03/20 15:32	1
Benzo[b]fluoranthene	ND		0.20	0.023	ug/L		10/02/20 13:05	10/03/20 15:32	1
Chrysene	ND		0.20	0.023	ug/L		10/02/20 13:05	10/03/20 15:32	1
Dibenz(a,h)anthracene	ND		0.20	0.018	ug/L		10/02/20 13:05	10/03/20 15:32	1
Fluoranthene	ND		0.20	0.015	ug/L		10/02/20 13:05	10/03/20 15:32	1
Fluorene	ND		0.20	0.013	ug/L		10/02/20 13:05	10/03/20 15:32	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.022	ug/L		10/02/20 13:05	10/03/20 15:32	1
Naphthalene	ND		0.20	0.014	ug/L		10/02/20 13:05	10/03/20 15:32	1
Phenanthrene	ND		0.20	0.0051	ug/L		10/02/20 13:05	10/03/20 15:32	1
Pyrene	ND		0.20	0.012	ug/L		10/02/20 13:05	10/03/20 15:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*75*		*33 - 144*	*10/02/20 13:05*	*10/03/20 15:32*	*1*
Nitrobenzene-d5 (Surr)	*64*		*28 - 139*	*10/02/20 13:05*	*10/03/20 15:32*	*1*
p-Terphenyl-d14 (Surr)	*109*		*23 - 160*	*10/02/20 13:05*	*10/03/20 15:32*	*1*

Lab Sample ID: LCS 570-99031/2-A
Matrix: Water
Analysis Batch: 99274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	2.00	1.50		ug/L		75	20 - 140
2-Methylnaphthalene	2.00	1.90		ug/L		95	21 - 140
Acenaphthene	2.00	1.57		ug/L		79	55 - 121
Acenaphthylene	2.00	1.61		ug/L		80	33 - 145
Anthracene	2.00	1.63		ug/L		82	27 - 133
Benzo[g,h,i]perylene	2.00	1.82		ug/L		91	25 - 157
Benzo[k]fluoranthene	2.00	1.75		ug/L		87	24 - 159
Benzo[a]anthracene	2.00	1.81		ug/L		90	33 - 143
Benzo[a]pyrene	2.00	1.86		ug/L		93	17 - 163
Benzo[b]fluoranthene	2.00	1.89		ug/L		95	24 - 159
Chrysene	2.00	1.60		ug/L		80	17 - 168
Dibenz(a,h)anthracene	2.00	1.70		ug/L		85	25 - 175
Fluoranthene	2.00	1.60		ug/L		80	26 - 137
Fluorene	2.00	1.60		ug/L		80	59 - 121
Indeno[1,2,3-cd]pyrene	2.00	1.66		ug/L		83	25 - 175
Naphthalene	2.00	1.41		ug/L		71	21 - 133
Phenanthrene	2.00	1.75		ug/L		88	54 - 120
Pyrene	2.00	1.77		ug/L		88	45 - 129

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: LCS 570-99031/2-A
Matrix: Water
Analysis Batch: 99274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99031

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	69		33 - 144
Nitrobenzene-d5 (Surr)	57		28 - 139
p-Terphenyl-d14 (Surr)	82		23 - 160

Lab Sample ID: LCSD 570-99031/3-A
Matrix: Water
Analysis Batch: 99274

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 99031

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene			2.00	1.86		ug/L		93	20 - 140	21	25
2-Methylnaphthalene			2.00	2.25		ug/L		112	21 - 140	17	25
Acenaphthene			2.00	1.86		ug/L		93	55 - 121	17	25
Acenaphthylene			2.00	1.87		ug/L		94	33 - 145	15	25
Anthracene			2.00	1.80		ug/L		90	27 - 133	10	25
Benzo[g,h,i]perylene			2.00	1.93		ug/L		96	25 - 157	6	25
Benzo[k]fluoranthene			2.00	1.79		ug/L		89	24 - 159	2	25
Benzo[a]anthracene			2.00	1.90		ug/L		95	33 - 143	5	25
Benzo[a]pyrene			2.00	2.00		ug/L		100	17 - 163	7	25
Benzo[b]fluoranthene			2.00	2.16		ug/L		108	24 - 159	13	25
Chrysene			2.00	1.73		ug/L		87	17 - 168	8	25
Dibenz(a,h)anthracene			2.00	1.85		ug/L		92	25 - 175	8	25
Fluoranthene			2.00	1.77		ug/L		89	26 - 137	10	25
Fluorene			2.00	1.84		ug/L		92	59 - 121	14	25
Indeno[1,2,3-cd]pyrene			2.00	1.75		ug/L		88	25 - 175	5	25
Naphthalene			2.00	1.75		ug/L		88	21 - 133	21	25
Phenanthrene			2.00	1.94		ug/L		97	54 - 120	10	25
Pyrene			2.00	1.84		ug/L		92	45 - 129	4	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	77		33 - 144
Nitrobenzene-d5 (Surr)	67		28 - 139
p-Terphenyl-d14 (Surr)	82		23 - 160

Lab Sample ID: 440-272545-1 MS
Matrix: Water
Analysis Batch: 99274

Client Sample ID: SG1-093020-DW
Prep Type: Total/NA
Prep Batch: 99031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1-Methylnaphthalene	ND		1.96	1.53		ug/L		78	20 - 140		
2-Methylnaphthalene	ND		1.96	1.93		ug/L		99	21 - 140		
Acenaphthene	ND		1.96	1.60		ug/L		82	49 - 121		
Acenaphthylene	ND		1.96	1.61		ug/L		82	33 - 145		
Anthracene	ND		1.96	1.72		ug/L		88	27 - 133		
Benzo[g,h,i]perylene	ND		1.96	1.95		ug/L		100	10 - 227		
Benzo[k]fluoranthene	ND		1.96	1.85		ug/L		94	24 - 159		
Benzo[a]anthracene	ND		1.96	1.87		ug/L		95	33 - 143		
Benzo[a]pyrene	ND		1.96	1.97		ug/L		101	17 - 163		
Benzo[b]fluoranthene	ND		1.96	1.90		ug/L		97	24 - 159		

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: 440-272545-1 MS
Matrix: Water
Analysis Batch: 99274

Client Sample ID: SG1-093020-DW
Prep Type: Total/NA
Prep Batch: 99031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	ND		1.96	1.71		ug/L		87	17 - 168
Dibenz(a,h)anthracene	ND		1.96	1.88		ug/L		96	10 - 219
Fluoranthene	ND		1.96	1.70		ug/L		87	26 - 137
Fluorene	ND		1.96	1.68		ug/L		86	59 - 121
Indeno[1,2,3-cd]pyrene	ND		1.96	1.82		ug/L		93	10 - 171
Naphthalene	ND		1.96	1.46		ug/L		75	21 - 133
Phenanthrene	ND		1.96	1.79		ug/L		92	54 - 120
Pyrene	ND		1.96	1.75		ug/L		89	18 - 168

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*73*		*33 - 144*
Nitrobenzene-d5 (Surr)	*61*		*28 - 139*
p-Terphenyl-d14 (Surr)	*82*		*23 - 160*

Lab Sample ID: 440-272545-1 MSD
Matrix: Water
Analysis Batch: 99274

Client Sample ID: SG1-093020-DW
Prep Type: Total/NA
Prep Batch: 99031

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	ND		1.86	1.59		ug/L		85	20 - 140	4	25
2-Methylnaphthalene	ND		1.86	2.00		ug/L		107	21 - 140	4	25
Acenaphthene	ND		1.86	1.74		ug/L		93	49 - 121	8	25
Acenaphthylene	ND		1.86	1.69		ug/L		91	33 - 145	5	25
Anthracene	ND		1.86	1.61		ug/L		86	27 - 133	7	25
Benzo[g,h,i]perylene	ND		1.86	1.91		ug/L		102	10 - 227	2	25
Benzo[k]fluoranthene	ND		1.86	1.86		ug/L		100	24 - 159	1	25
Benzo[a]anthracene	ND		1.86	1.88		ug/L		101	33 - 143	0	25
Benzo[a]pyrene	ND		1.86	1.98		ug/L		106	17 - 163	0	25
Benzo[b]fluoranthene	ND		1.86	1.96		ug/L		105	24 - 159	3	25
Chrysene	ND		1.86	1.68		ug/L		90	17 - 168	2	25
Dibenz(a,h)anthracene	ND		1.86	1.83		ug/L		98	10 - 219	2	25
Fluoranthene	ND		1.86	1.71		ug/L		92	26 - 137	1	25
Fluorene	ND		1.86	1.68		ug/L		90	59 - 121	0	25
Indeno[1,2,3-cd]pyrene	ND		1.86	1.81		ug/L		97	10 - 171	1	25
Naphthalene	ND		1.86	1.53		ug/L		82	21 - 133	4	25
Phenanthrene	ND		1.86	1.83		ug/L		98	54 - 120	2	25
Pyrene	ND		1.86	1.79		ug/L		96	18 - 168	2	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*77*		*33 - 144*
Nitrobenzene-d5 (Surr)	*60*		*28 - 139*
p-Terphenyl-d14 (Surr)	*84*		*23 - 160*

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Lab Sample ID: MB 570-100412/1-A
Matrix: Water
Analysis Batch: 101117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 100412

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0040	0.00051	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-18	ND		0.0020	0.00046	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-28	ND		0.0020	0.00053	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-44	ND		0.0020	0.00071	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-52	ND		0.0020	0.00056	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-66	ND		0.0020	0.00040	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-101	ND		0.0020	0.00050	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-105	ND		0.0020	0.00047	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-118	ND		0.0020	0.00050	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-128	ND		0.0020	0.00043	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-132/153	ND		0.0040	0.00069	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-138/158	ND		0.0040	0.00060	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-170	ND		0.0020	0.00042	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-180	ND		0.0020	0.00060	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-187	ND		0.0020	0.00043	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-195	ND		0.0020	0.00075	ug/L		10/08/20 13:15	10/12/20 12:59	1
PCB-206	ND		0.0020	0.00043	ug/L		10/08/20 13:15	10/12/20 12:59	1
Decachlorobiphenyl	ND		0.0020	0.0013	ug/L		10/08/20 13:15	10/12/20 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*70*		*50 - 150*	*10/08/20 13:15*	*10/12/20 12:59*	*1*
p-Terphenyl-d14 (Surr)	*101*		*50 - 150*	*10/08/20 13:15*	*10/12/20 12:59*	*1*

Lab Sample ID: LCS 570-100412/2-A
Matrix: Water
Analysis Batch: 101117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100412

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-5/8	0.500	0.542		ug/L		108	50 - 150
PCB-18	0.500	0.479		ug/L		96	50 - 150
PCB-28	0.500	0.611		ug/L		122	50 - 150
PCB-44	0.500	0.534		ug/L		107	50 - 150
PCB-52	0.500	0.421		ug/L		84	50 - 150
PCB-66	0.500	0.519		ug/L		104	50 - 150
PCB-101	0.500	0.571		ug/L		114	50 - 150
PCB-105	0.500	0.609		ug/L		122	50 - 150
PCB-118	0.500	0.563		ug/L		113	50 - 150
PCB-128	0.500	0.481		ug/L		96	50 - 150
PCB-132/153	0.500	0.721		ug/L		144	50 - 150
PCB-138/158	0.500	0.361		ug/L		72	50 - 150
PCB-170	0.500	0.499		ug/L		100	50 - 150
PCB-180	0.500	0.495		ug/L		99	50 - 150
PCB-187	0.500	0.531		ug/L		106	50 - 150
PCB-195	0.500	0.437		ug/L		87	50 - 150
PCB-206	0.500	0.511		ug/L		102	50 - 150
Decachlorobiphenyl	0.500	0.483		ug/L		97	50 - 150

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: LCS 570-100412/2-A
Matrix: Water
Analysis Batch: 101117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100412

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	77		50 - 150
p-Terphenyl-d14 (Surr)	105		50 - 150

Lab Sample ID: LCSD 570-100412/3-A
Matrix: Water
Analysis Batch: 101117

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 100412

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8			0.500	0.504		ug/L		101	50 - 150	7	25
PCB-18			0.500	0.457		ug/L		91	50 - 150	5	25
PCB-28			0.500	0.579		ug/L		116	50 - 150	5	25
PCB-44			0.500	0.479		ug/L		96	50 - 150	11	25
PCB-52			0.500	0.417		ug/L		83	50 - 150	1	25
PCB-66			0.500	0.469		ug/L		94	50 - 150	10	25
PCB-101			0.500	0.522		ug/L		104	50 - 150	9	25
PCB-105			0.500	0.533		ug/L		107	50 - 150	13	25
PCB-118			0.500	0.490		ug/L		98	50 - 150	14	25
PCB-128			0.500	0.422		ug/L		84	50 - 150	13	25
PCB-132/153			0.500	0.636		ug/L		127	50 - 150	13	25
PCB-138/158			0.500	0.315		ug/L		63	50 - 150	13	25
PCB-170			0.500	0.465		ug/L		93	50 - 150	7	25
PCB-180			0.500	0.436		ug/L		87	50 - 150	13	25
PCB-187			0.500	0.465		ug/L		93	50 - 150	13	25
PCB-195			0.500	0.385		ug/L		77	50 - 150	13	25
PCB-206			0.500	0.441		ug/L		88	50 - 150	15	25
Decachlorobiphenyl			0.500	0.414		ug/L		83	50 - 150	15	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	65		50 - 150
p-Terphenyl-d14 (Surr)	95		50 - 150

Lab Sample ID: MB 570-98750/1-A
Matrix: Water
Analysis Batch: 98998

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 98750

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.0040	0.00051	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-18	ND		0.0020	0.00046	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-28	ND		0.0020	0.00053	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-44	ND		0.0020	0.00071	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-52	ND		0.0020	0.00056	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-66	ND		0.0020	0.00040	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-101	ND		0.0020	0.00050	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-105	ND		0.0020	0.00047	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-118	ND		0.0020	0.00050	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-128	ND		0.0020	0.00043	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-132/153	ND		0.0040	0.00069	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-138/158	ND		0.0040	0.00060	ug/L		10/01/20 15:12	10/02/20 22:01	1

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: MB 570-98750/1-A
Matrix: Water
Analysis Batch: 98998

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 98750

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-170	ND		0.0020	0.00042	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-180	ND		0.0020	0.00060	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-187	ND		0.0020	0.00043	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-195	ND		0.0020	0.00075	ug/L		10/01/20 15:12	10/02/20 22:01	1
PCB-206	ND		0.0020	0.00043	ug/L		10/01/20 15:12	10/02/20 22:01	1
Decachlorobiphenyl	ND		0.0020	0.0013	ug/L		10/01/20 15:12	10/02/20 22:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*67*		*50 - 150*	*10/01/20 15:12*	*10/02/20 22:01*	*1*
p-Terphenyl-d14 (Surr)	*104*		*50 - 150*	*10/01/20 15:12*	*10/02/20 22:01*	*1*

Lab Sample ID: LCS 570-98750/2-A
Matrix: Water
Analysis Batch: 98998

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 98750

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-5/8			0.500	0.492		ug/L		98	50 - 150		
PCB-18			0.500	0.429		ug/L		86	50 - 150		
PCB-28			0.500	0.507		ug/L		101	50 - 150		
PCB-44			0.500	0.504		ug/L		101	50 - 150		
PCB-52			0.500	0.429		ug/L		86	50 - 150		
PCB-66			0.500	0.479		ug/L		96	50 - 150		
PCB-101			0.500	0.467		ug/L		93	50 - 150		
PCB-105			0.500	0.501		ug/L		100	50 - 150		
PCB-118			0.500	0.483		ug/L		97	50 - 150		
PCB-128			0.500	0.457		ug/L		91	50 - 150		
PCB-132/153			0.500	0.591		ug/L		118	50 - 150		
PCB-138/158			0.500	0.301		ug/L		60	50 - 150		
PCB-170			0.500	0.355		ug/L		71	50 - 150		
PCB-180			0.500	0.390		ug/L		78	50 - 150		
PCB-187			0.500	0.479		ug/L		96	50 - 150		
PCB-195			0.500	0.324		ug/L		65	50 - 150		
PCB-206			0.500	0.339		ug/L		68	50 - 150		
Decachlorobiphenyl			0.500	0.313		ug/L		63	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*64*		*50 - 150*
p-Terphenyl-d14 (Surr)	*101*		*50 - 150*

Lab Sample ID: LCSD 570-98750/3-A
Matrix: Water
Analysis Batch: 98998

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 98750

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8			0.500	0.465		ug/L		93	50 - 150	6	25
PCB-18			0.500	0.402		ug/L		80	50 - 150	7	25
PCB-28			0.500	0.516		ug/L		103	50 - 150	2	25
PCB-44			0.500	0.503		ug/L		101	50 - 150	0	25

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: LCSD 570-98750/3-A
Matrix: Water
Analysis Batch: 98998

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 98750

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-52			0.500	0.390		ug/L		78	50 - 150	10	25
PCB-66			0.500	0.429		ug/L		86	50 - 150	11	25
PCB-101			0.500	0.486		ug/L		97	50 - 150	4	25
PCB-105			0.500	0.516		ug/L		103	50 - 150	3	25
PCB-118			0.500	0.503		ug/L		101	50 - 150	4	25
PCB-128			0.500	0.413		ug/L		83	50 - 150	10	25
PCB-132/153			0.500	0.619		ug/L		124	50 - 150	5	25
PCB-138/158			0.500	0.283		ug/L		57	50 - 150	6	25
PCB-170			0.500	0.376		ug/L		75	50 - 150	6	25
PCB-180			0.500	0.382		ug/L		76	50 - 150	2	25
PCB-187			0.500	0.411		ug/L		82	50 - 150	15	25
PCB-195			0.500	0.324		ug/L		65	50 - 150	0	25
PCB-206			0.500	0.347		ug/L		69	50 - 150	2	25
Decachlorobiphenyl			0.500	0.316		ug/L		63	50 - 150	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*57*		*50 - 150*
p-Terphenyl-d14 (Surr)	*99*		*50 - 150*

Lab Sample ID: 440-272545-1 MS
Matrix: Water
Analysis Batch: 98998

Client Sample ID: SG1-093020-DW
Prep Type: Total/NA
Prep Batch: 98750

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-5/8	ND		0.525	0.458		ug/L		87	50 - 150		
PCB-18	ND		0.525	0.407		ug/L		78	50 - 150		
PCB-28	ND		0.525	0.491		ug/L		94	50 - 150		
PCB-44	ND		0.525	0.484		ug/L		92	50 - 150		
PCB-52	ND		0.525	0.344		ug/L		66	50 - 150		
PCB-66	ND		0.525	0.394		ug/L		75	50 - 150		
PCB-101	ND	F1	0.525	ND	F1	ug/L		0	50 - 150		
PCB-105	ND		0.525	0.476		ug/L		91	50 - 150		
PCB-118	ND		0.525	0.455		ug/L		87	50 - 150		
PCB-128	ND		0.525	0.342		ug/L		65	50 - 150		
PCB-132/153	ND		0.525	0.543		ug/L		103	50 - 150		
PCB-138/158	ND	F1	0.525	0.240	F1	ug/L		46	50 - 150		
PCB-170	ND		0.525	0.296		ug/L		56	50 - 150		
PCB-180	ND		0.525	0.309		ug/L		59	50 - 150		
PCB-187	ND		0.525	0.337		ug/L		64	50 - 150		
PCB-195	ND		0.525	0.278		ug/L		53	50 - 150		
PCB-206	ND		0.525	0.314		ug/L		60	50 - 150		
Decachlorobiphenyl	ND		0.525	0.330		ug/L		63	50 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*58*		*50 - 150*
p-Terphenyl-d14 (Surr)	*92*		*50 - 150*

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: 440-272545-1 MSD
Matrix: Water
Analysis Batch: 98998

Client Sample ID: SG1-093020-DW
Prep Type: Total/NA
Prep Batch: 98750

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-5/8	ND		0.507	0.458		ug/L		90	50 - 150	0	25
PCB-18	ND		0.507	0.405		ug/L		80	50 - 150	0	25
PCB-28	ND		0.507	0.495		ug/L		98	50 - 150	1	25
PCB-44	ND		0.507	0.487		ug/L		96	50 - 150	1	25
PCB-52	ND		0.507	0.373		ug/L		74	50 - 150	8	25
PCB-66	ND		0.507	0.415		ug/L		82	50 - 150	5	25
PCB-101	ND	F1	0.507	0.442		ug/L		87	50 - 150	NC	25
PCB-105	ND		0.507	0.460		ug/L		91	50 - 150	3	25
PCB-118	ND		0.507	0.458		ug/L		90	50 - 150	1	25
PCB-128	ND		0.507	0.411		ug/L		81	50 - 150	18	25
PCB-132/153	ND		0.507	0.543		ug/L		107	50 - 150	0	25
PCB-138/158	ND	F1	0.507	0.290		ug/L		57	50 - 150	19	25
PCB-170	ND		0.507	0.317		ug/L		63	50 - 150	7	25
PCB-180	ND		0.507	0.381		ug/L		75	50 - 150	21	25
PCB-187	ND		0.507	0.385		ug/L		76	50 - 150	13	25
PCB-195	ND		0.507	0.297		ug/L		59	50 - 150	6	25
PCB-206	ND		0.507	0.370		ug/L		73	50 - 150	16	25
Decachlorobiphenyl	ND		0.507	0.394		ug/L		78	50 - 150	18	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*56*		*50 - 150*
p-Terphenyl-d14 (Surr)	*88*		*50 - 150*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 570-98827/1-A
Matrix: Water
Analysis Batch: 98819

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 98827

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	ND		0.010	0.0052	ug/L		10/01/20 19:30	10/02/20 23:58	1
2,4'-DDT	ND		0.0040	0.0017	ug/L		10/01/20 19:30	10/02/20 23:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*20 - 139*	*10/01/20 19:30*	*10/02/20 23:58*	*1*
DCB Decachlorobiphenyl (Surr)	*69*		*20 - 154*	*10/01/20 19:30*	*10/02/20 23:58*	*1*

Lab Sample ID: LCS 570-98827/2-A
Matrix: Water
Analysis Batch: 98819

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 98827

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDT			0.0500	0.0346		ug/L		69	50 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*61*		*20 - 139*
DCB Decachlorobiphenyl (Surr)	*52*		*20 - 154*

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 570-98827/3-A
Matrix: Water
Analysis Batch: 98819

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 98827

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDT			0.0500	0.0332		ug/L		66	50 - 135	4	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*59*		*20 - 139*
DCB Decachlorobiphenyl (Surr)	*48*		*20 - 154*

Lab Sample ID: 440-272545-1 MS
Matrix: Water
Analysis Batch: 98819

Client Sample ID: SG1-093020-DW
Prep Type: Total/NA
Prep Batch: 98827

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDT	ND		0.0466	0.0547		ug/L		117	50 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*76*		*20 - 139*
DCB Decachlorobiphenyl (Surr)	*67*		*20 - 154*

Lab Sample ID: 440-272545-1 MSD
Matrix: Water
Analysis Batch: 98819

Client Sample ID: SG1-093020-DW
Prep Type: Total/NA
Prep Batch: 98827

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDT	ND		0.0467	0.0525		ug/L		112	50 - 135	4	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*74*		*20 - 139*
DCB Decachlorobiphenyl (Surr)	*67*		*20 - 154*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-626473/1-A
Matrix: Water
Analysis Batch: 626532

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 626473

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.50	0.50	ug/L		10/02/20 11:00	10/02/20 16:27	1
Lead	ND		0.50	0.50	ug/L		10/02/20 11:00	10/02/20 16:27	1
Zinc	2.65		2.5	2.5	ug/L		10/02/20 11:00	10/02/20 16:27	1

Lab Sample ID: LCS 440-626473/2-A
Matrix: Water
Analysis Batch: 626532

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 626473

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Copper			80.0	75.8		ug/L		95	85 - 115		
Lead			80.0	71.9		ug/L		90	85 - 115		
Zinc			80.0	77.5		ug/L		97	85 - 115		

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-272545-1 MS
Matrix: Water
Analysis Batch: 626532

Client Sample ID: SG1-093020-DW
Prep Type: Total Recoverable
Prep Batch: 626473

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	ND		80.0	65.8		ug/L		82	70 - 130
Lead	ND		80.0	67.1		ug/L		84	70 - 130
Zinc	ND		80.0	95.7		ug/L		120	70 - 130

Lab Sample ID: 440-272545-1 MSD
Matrix: Water
Analysis Batch: 626532

Client Sample ID: SG1-093020-DW
Prep Type: Total Recoverable
Prep Batch: 626473

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	ND		80.0	64.9		ug/L		81	70 - 130	1	20
Lead	ND		80.0	66.5		ug/L		83	70 - 130	1	20
Zinc	ND		80.0	99.4		ug/L		124	70 - 130	4	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-626393/1
Matrix: Water
Analysis Batch: 626393

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			10/01/20 14:39	1

Lab Sample ID: LCS 440-626393/2
Matrix: Water
Analysis Batch: 626393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	988		mg/L		99	85 - 115

Lab Sample ID: 440-272545-1 DU
Matrix: Water
Analysis Batch: 626393

Client Sample ID: SG1-093020-DW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	12		11.7		mg/L		3	10

GC/MS Semi VOA

Prep Batch: 98750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-2	SG1-093020-DD	Total/NA	Water	3510C	
440-272545-3	SG1-093020-EB	Total/NA	Water	3510C	
MB 570-98750/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-98750/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-98750/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-272545-1 MS	SG1-093020-DW	Total/NA	Water	3510C	
440-272545-1 MSD	SG1-093020-DW	Total/NA	Water	3510C	

Analysis Batch: 98998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-2	SG1-093020-DD	Total/NA	Water	8270C SIM CON	98750
440-272545-3	SG1-093020-EB	Total/NA	Water	8270C SIM CON	98750
MB 570-98750/1-A	Method Blank	Total/NA	Water	8270C SIM CON	98750
LCS 570-98750/2-A	Lab Control Sample	Total/NA	Water	8270C SIM CON	98750
LCSD 570-98750/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM CON	98750
440-272545-1 MS	SG1-093020-DW	Total/NA	Water	8270C SIM CON	98750
440-272545-1 MSD	SG1-093020-DW	Total/NA	Water	8270C SIM CON	98750

Prep Batch: 99031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-1	SG1-093020-DW	Total/NA	Water	3510C	
440-272545-2	SG1-093020-DD	Total/NA	Water	3510C	
440-272545-3	SG1-093020-EB	Total/NA	Water	3510C	
MB 570-99031/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-99031/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-99031/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-272545-1 MS	SG1-093020-DW	Total/NA	Water	3510C	
440-272545-1 MSD	SG1-093020-DW	Total/NA	Water	3510C	

Analysis Batch: 99274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-1	SG1-093020-DW	Total/NA	Water	8270C SIM	99031
440-272545-2	SG1-093020-DD	Total/NA	Water	8270C SIM	99031
440-272545-3	SG1-093020-EB	Total/NA	Water	8270C SIM	99031
MB 570-99031/1-A	Method Blank	Total/NA	Water	8270C SIM	99031
LCS 570-99031/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	99031
LCSD 570-99031/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	99031
440-272545-1 MS	SG1-093020-DW	Total/NA	Water	8270C SIM	99031
440-272545-1 MSD	SG1-093020-DW	Total/NA	Water	8270C SIM	99031

Prep Batch: 100412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-1	SG1-093020-DW	Total/NA	Water	3510C	
MB 570-100412/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-100412/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-100412/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 101117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-1	SG1-093020-DW	Total/NA	Water	8270C SIM CON	100412
MB 570-100412/1-A	Method Blank	Total/NA	Water	8270C SIM CON	100412

GC/MS Semi VOA (Continued)

Analysis Batch: 101117 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-100412/2-A	Lab Control Sample	Total/NA	Water	8270C SIM CON	100412
LCSD 570-100412/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM CON	100412

GC Semi VOA

Analysis Batch: 98819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-1	SG1-093020-DW	Total/NA	Water	8081A	98827
440-272545-2	SG1-093020-DD	Total/NA	Water	8081A	98827
440-272545-3	SG1-093020-EB	Total/NA	Water	8081A	98827
MB 570-98827/1-A	Method Blank	Total/NA	Water	8081A	98827
LCS 570-98827/2-A	Lab Control Sample	Total/NA	Water	8081A	98827
LCSD 570-98827/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	98827
440-272545-1 MS	SG1-093020-DW	Total/NA	Water	8081A	98827
440-272545-1 MSD	SG1-093020-DW	Total/NA	Water	8081A	98827

Prep Batch: 98827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-1	SG1-093020-DW	Total/NA	Water	3510C	
440-272545-2	SG1-093020-DD	Total/NA	Water	3510C	
440-272545-3	SG1-093020-EB	Total/NA	Water	3510C	
MB 570-98827/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-98827/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-98827/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-272545-1 MS	SG1-093020-DW	Total/NA	Water	3510C	
440-272545-1 MSD	SG1-093020-DW	Total/NA	Water	3510C	

Metals

Prep Batch: 626473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-1	SG1-093020-DW	Total Recoverable	Water	200.2	
440-272545-2	SG1-093020-DD	Total Recoverable	Water	200.2	
440-272545-3	SG1-093020-EB	Total Recoverable	Water	200.2	
MB 440-626473/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-626473/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-272545-1 MS	SG1-093020-DW	Total Recoverable	Water	200.2	
440-272545-1 MSD	SG1-093020-DW	Total Recoverable	Water	200.2	

Analysis Batch: 626532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-1	SG1-093020-DW	Total Recoverable	Water	200.8	626473
440-272545-2	SG1-093020-DD	Total Recoverable	Water	200.8	626473
440-272545-3	SG1-093020-EB	Total Recoverable	Water	200.8	626473
MB 440-626473/1-A	Method Blank	Total Recoverable	Water	200.8	626473
LCS 440-626473/2-A	Lab Control Sample	Total Recoverable	Water	200.8	626473
440-272545-1 MS	SG1-093020-DW	Total Recoverable	Water	200.8	626473
440-272545-1 MSD	SG1-093020-DW	Total Recoverable	Water	200.8	626473

QC Association Summary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-272545-1

General Chemistry

Analysis Batch: 626393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272545-1	SG1-093020-DW	Total/NA	Water	SM 2540D	
440-272545-2	SG1-093020-DD	Total/NA	Water	SM 2540D	
440-272545-3	SG1-093020-EB	Total/NA	Water	SM 2540D	
MB 440-626393/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-626393/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-272545-1 DU	SG1-093020-DW	Total/NA	Water	SM 2540D	

Definitions/Glossary

Client: CH2M Hill, Inc.
Project/Site: KMEP/SFPP Norwalk Site

Job ID: 440-272545-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
X	Surrogate recovery exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: CH2M Hill, Inc.
Job ID: 440-272545-1
Project/Site: KMEP/SFPP Norwalk Site

Laboratory: Eurofins Calscience Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska	State	CA01531	06-30-21
Arizona	State	AZ0671	10-13-20
California	Los Angeles County Sanitation Districts	10256	06-30-21
California	State	2706	06-30-21
Guam	State	20-004R	01-23-21
Hawaii	State	CA01531	01-29-21
Kansas	NELAP	E-10420	07-31-21
Nevada	State	CA015312021-1	07-31-21
Oregon	NELAP	4028 - 008	01-29-21
USDA	US Federal Programs	P330-18-00214	07-09-21
Washington	State	C900	09-03-21

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-30-21
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-30-21
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-21
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-21

Eurofins Calscience Laboratories

440-272545 Chain of Custody

CHAIN OF CUSTODY RECORD

DATE: September 30, 2020
PAGE: 1 of 1

Section A — Required Client Information		Section B — Required Project Information		Section C — Invoice Information		Section D — Sample Information	
Company	Kinder Morgan Energy Partners Attention Ryan Koch	Report To	Eric Davis	Attention	Ryan Koch - Ref AFE# 81195	Sampler Name	Nils Orniczky
Address	1001 Louisiana St, Houston, TX 77002	Copy To	Ryan Koch	Company Name	Kinder Morgan Energy Partners	Sampler Signature	[signature]
Email To	[illegible]	Purchase Order No		Address	1001 Louisiana St, Houston, TX 77002	Sample Date	9-30-20
Phone 715 420-6750	Fax 714-560-4801	Project Name	SFPP Norwalk	EC Project Manager	Janice Hsu		

Section E — Required Sample Information

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	TOTAL # OF CONTAINERS	Analysis Test	Total Suspended Solids (SM2540D)	Metals (EPA 200.8 Cu, Pb, Zn)	Pesticides (SW8081A) (2,4-DDT, 4,4-DDT)	PAHs (SW8270A-SIM)	Total PCBs (EPA 8270 SIM)	Comments
						CONTAINER TYPE			P	P	A	A	A	
						# OF CONTAINERS			1	1	2	2	2	
						PRESERVATIVE			--	N	-	--	--	
						VOLUME (mL)			1000	500	1000	1000	1000	Provide MS/MSD for sample 1 SG1-093020-DW
1	SG1-093020-DW	San Gabriel River	WW	G	9/30/20	1042	16		X	X	X	X	X	PAHs 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene
2	SG1-093020-DD	San Gabriel River	WW	G	9/30/20	1045	8		X	X	X	X	X	
3	SG1-093020-EB	Equipment Blank	W	G	9/30/20	1039	8		X	X	X	X	X	Pesticides 2,4-DDT, 4,4-DDT reported as Total DDT
4														
5														
6														
7														
8														
9														
10														
11														
12														

9-30-20 [signature]

Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
[signature]	9-30-20/1255		
Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
		[signature] EC IRV	9/30/20 12:55

Turn Around Time (TAT)
- ☐ A = Same Day
- ☐ B = 24 Hours
- ☐ C = 48 Hours
- ☐ D = 72 Hours
- ☐ E = 5 Workdays
- ☒ E = 10 Workdays

TAT starts at 8 AM the following day if samples received after 3 or PM

Special Instructions
Also report pesticides as Total DDT
Provide EDD in EQuIS EQEDD format

Matrix: W = Water; WW = Wastewater; O = Oil; P = Product; S = Soil; Other/Specify

Preservatives: H = HCl; N = HNO3; S = H2SO4; T = Zn(Ac)2; Na2S2O3; Other/Specify

Container Type: T = Tube; V = VOA; P = Plastic; A = Amber; J = Jar; G = Glass; M = Metal; C = Can

1289 4.3/4.2
4.4/4.3
4.7/4.6

Eurofins Calscience Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone: 949-261-1022 Fax: 949-260-3297

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hsu, Janice	Carrier Tracking No(s):	COC No: 440-162450.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Janice.Hsu@Eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Calscience LLC		Accreditations Required (See note):		Job #: 440-272545-1
Address: 7440 Lincoln Way, ,	Due Date Requested: 10/13/2020			
City: Garden Grove	TAT Requested (days):			
State, Zip: CA, 92841				
Phone: 714-895-5494(Tel) 714-894-7501(Fax)	PO #:			
Email:	WO #:			
Project Name: KMEP/SFPP Norwalk Site	Project #: 44011238			
Site: KMEP Norwalk Airs	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270C_SIM_PAH/3510C SIM PAH	8270C_SIM_CON/3510C (MOD) SIM Congeners	8081A_LL/3510C_LL Routine Pesticides List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
SG1-093020-DW (440-272545-1)	9/30/20	10:40 Pacific		Water			X	X	X	4	
SG1-093020-DW (440-272545-1MS)	9/30/20	10:40 Pacific	MS	Water			X	X	X	4	
SG1-093020-DW (440-272545-1MSD)	9/30/20	10:40 Pacific	MSD	Water			X	X	X	4	
SG1-093020-DD (440-272545-2)	9/30/20	10:45 Pacific		Water			X	X	X	6	
SG1-093020-EB (440-272545-3)	9/30/20	10:20 Pacific		Water			X	X	X	6	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		9/30/20 1735	EC-IRV		09/30/2020 1735	EC
2		09/30/2020 1845	EC		9-30-2020 18:45	ECI
3		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.5 / 1.7 2.7 / 1.9 SC6

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 440-272545-1

Login Number: 272545
List Number: 1
Creator: Skinner, Alma D

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 440-272545-1

Login Number: 272545
List Number: 2
Creator: Cortez Diaz, Antonio

List Source: Eurofins Calscience
List Creation: 09/30/20 08:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment B
Data Quality Assurance/Quality Control

Data Quality Assurance/Quality Control

Data quality was evaluated by examining the holding times, laboratory method blanks, surrogate percent recoveries, laboratory control sample/laboratory control sample duplicates (LCS/LCSD) and matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent differences (RPDs). Data quality review results for each analysis are outlined in the following subsections.

Analytical Data

The data quality evaluation report covers three normal effluent samples. Samples were collected on October 27, November 23, and December 8, 2020. Analyses were performed by Asset Laboratories in Cerritos, California and BC Laboratories in Bakersfield, California. The sample results were reported as three sample delivery groups:

Sample Delivery Groups
N042772
N043135
N043364

Eleven methods were used to analyze the environmental samples. Samples were collected and submitted directly to the Asset Laboratories for analysis. Asset Laboratories was responsible for shipment of samples to all other laboratories. Samples were analyzed for one or more of the following analytes/method:

Parameter	Method
Turbidity	SM2130B
Total suspended solids	SM2540D
Settleable solids	SM2540F
Biochemical oxygen demand (BOD)	SM5210B
Oil and grease	E1664
Metals	EPA 200.8/EPA 245.1
Ammonia	SM4500-NH3-G
Total petroleum hydrocarbons – gasoline, diesel and motor oil ranges	SW8015B
Volatile organic compounds	SW8260B
Phenol	SW8270C

Data validation flags were assigned using guidance from the EPA Contract Laboratory National Functional Guidelines for Organic Superfund Methods Data Review (EPA, 2017) and EPA Contract Laboratory National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA, 2017). Multiple flags are routinely applied to specific sample method/ matrix/ analyte combinations, but there will be only one final flag. A final flag is applied to the data and is the most conservative of the applied data validation flags. The final flag also includes blank sample impacts.

The data validation flags are as follows:

- J = Analyte was present, but the reported value may not be accurate or precise (estimated). The result was estimated because it was less than the referenced reporting limit, but greater than the method detection limit, or because a QC exceedance occurred.
- R = Data were unusable because of deficiencies in the ability to analyze the sample and meet QC criteria.
- U = Analyte was not detected at the specified detection limit.
- UJ = Analyte was not detected, and the specified detection limit may not be accurate or precise (estimated).

Findings

The overall summaries of the data validation findings are contained in the following subsections.

Holding Times

All holding time criteria were met.

Method Blanks

Method blanks were analyzed at the required frequency and were free of contamination that would affect the sample results with the following exceptions:

- TPH-gasoline was detected less than the reporting limit (RL) in the method blanks for Method SW8015B. Three associated results were detected less than five times the blank concentrations and were qualified as not detected and flagged "U" in samples EFF-102720, EFF-112320 and EFF-120820.
- TPH-diesel and total TPH were detected less than the RL in the method blanks for Method SW8015B. Five associated results were detected less than five times the blank concentrations and were qualified as not detected and flagged "U" in samples EFF-102720, EFF-112320 and EFF-120820.

Surrogates

All surrogate recovery criteria were met.

Internal Standards

All internal standard criteria were met.

Laboratory Control Samples

LCS/LCSDs were analyzed as required. All accuracy and precision criteria were met.

Matrix Spikes/Matrix Spike Duplicates

The results of MS/MSD analyses provide information about the possible influence of the matrix on either accuracy or precision of the measurements. There were no MS/MSD recovery or RPD exceedances that would affect the sample results.

Chain-of-Custody

Each sample was documented in a completed COC and received at the laboratory in good condition.

Overall Assessment

An overall evaluation of the data indicates that the sample handling, shipment, and analytical procedures have been adequately completed, and that the analytical results are considered usable taking into consideration possible biases as described above.

Attachment C
Waste Manifest

Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the material.

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAT080033962	1	(800) 483-3718	014576487 FLE

GENERATOR

5. Generator's Name and Mailing Address
Sipp, L.P. Norwalk Station
1001 Louisiana St
Houston, TX 77002
Generator's Phone:

Generator's Site Address (if different than mailing address)
15306 Norwalk Boulevard
Norwalk, CA 90651

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
Clean Harbors Grassy Mountain LLC
3 Miles East 7 Miles North of Knolls
Grantsville, UT 84029
Facility's Phone: (435) 884-8900
UTD991301748

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. NON-RCRA Hazardous Waste, Solid, (Filters)	001	DM	0125	P	181		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1. CH1424321 - 1x55
Truck #5526

Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience, or safety

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: R JAMES DYE — Signature — Month: 11 Day: 05 Year: 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Sal Herrera — Signature — Month: 11 Day: 05 Year: 20

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month — Day — Year

EPA Form 8700-22 (Rev. 12-17). Previous editions are obsolete.

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

DW 2005323300 PPW