February 25, 2020

Jerome Cruz, PhD
Washington State Department of Ecology
Northwest Regional Office
3190 160th Street Southeast
Bellevue, Washington 98008

Re: Progress Report No. 2, Supplemental Groundwater Investigation
South Recycling and Disposal Station, South Park Landfill Site
Project No. 190257-001-04

Dear Dr. Cruz:

Aspect Consulting, LLC (Aspect) has prepared this second Progress Report to describe completed field activities and transmit the unvalidated analytical data from the second round of supplemental groundwater monitoring completed at Seattle Public Utilities' (SPU) South Recycling and Disposal Station (SRDS) property in Seattle, Washington. Our work was done in accordance with the "Work Plan for Groundwater Investigation, South Recycling and Disposal Station, South Park Landfill Site[1]" (Work Plan; Aspect, 2019a). The analytical data from the two rounds of groundwater monitoring will be validated, analyzed, and presented in a report

Field Activities Completed in Reporting Period

- Aspect conducted the second round of groundwater sampling in the six new monitoring wells on January 24, 2020, using low-flow sampling technique in accordance with the Work Plan (Aspect, 2019a).

- Aspect submitted the groundwater samples to Analytical Resources, Inc. (ARI), a Washington State Department of Ecology (Ecology)-accredited analytical laboratory, on January 24, 2020, for analysis of the following analytes:

    - Gasoline-range petroleum hydrocarbons (NWTPH-Gx method) and diesel-and oil-range petroleum hydrocarbons (NWTPH-Dx method)

    - Total and dissolved metals (arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, zinc) (U.S. Environmental Protection Agency [EPA] Method 6020A and for mercury EPA Method 7470A)

    - Full suite of VOCs (EPA Method 8260C)

[1] Aspect Consulting, LLC (Aspect), 2019a, Work Plan for Supplemental Groundwater Investigation, South Recycling and Disposal Station, South Park Landfill Site, prepared for HDR, October 1, 2019.

  - Full suite of semivolatile organic compounds (SVOCs) including low-level carcinogenic polycyclic aromatic hydrocarbons (cPAHs) (EPA Method 8270D, with EPA Method 8270D-SIM[2] for low-level cPAHs)
  - 1,4-Dioxane (EPA Method 8270D-SIM)
  - Polychlorinated biphenyls (PCBs) (EPA Method 8082A)

- Aspect collected a composite sample of drummed drill cuttings soil for chemical testing to profile the drummed soil for off-site disposal, as described in the first progress report for this project[3].

Appendix A includes the unvalidated analytical data produced by ARI Inc. from the second round of groundwater monitoring.

Management of Investigation-Derived Waste

The investigation-derived soil cuttings and purge water remain in labeled drums in a secure location on site. In total, there are two 55-gallon drums containing soil cuttings, one 16-gallon drum of purge water from MW-104 and three 55-gallon drums of purge water from wells other than MW-104. As described in the December 4, 2019 progress report, the soil cuttings will be profiled and transported to a permitted Subtitle D landfill for disposal, and the purge water from well MW-104 (containing sheen) will be transported to a permitted off-site facility for proper treatment and disposition. Based on the analytical data from the two rounds of groundwater sampling, the purge water from wells other than MW-104 complies with King County General Discharge Limitations for discharge to sanitary sewer and will therefore be discharged to the on-site sanitary sewer.

Decommissioning of New Monitoring Wells

As described in Section 5 of the Work Plan (Aspect, 2019), the six monitoring wells installed for this supplemental groundwater investigation will be decommissioned (in accordance with Chapter 173-160 WAC requirements) prior to start of construction of the South Transfer Station Phase II Project, which is currently anticipated to start in 2020.

[2] SIM = selective ion monitoring.
[3] Aspect, 2019b, Progress Report No. 1, Supplemental Groundwater Investigation, South Recycling and Disposal Station, South Park Landfill Site, December 4, 2019.

Sincerely,

Aspect consulting, LLC

David Unruh, GIT
Staff Geologist
dunruh@aspectconsulting.com

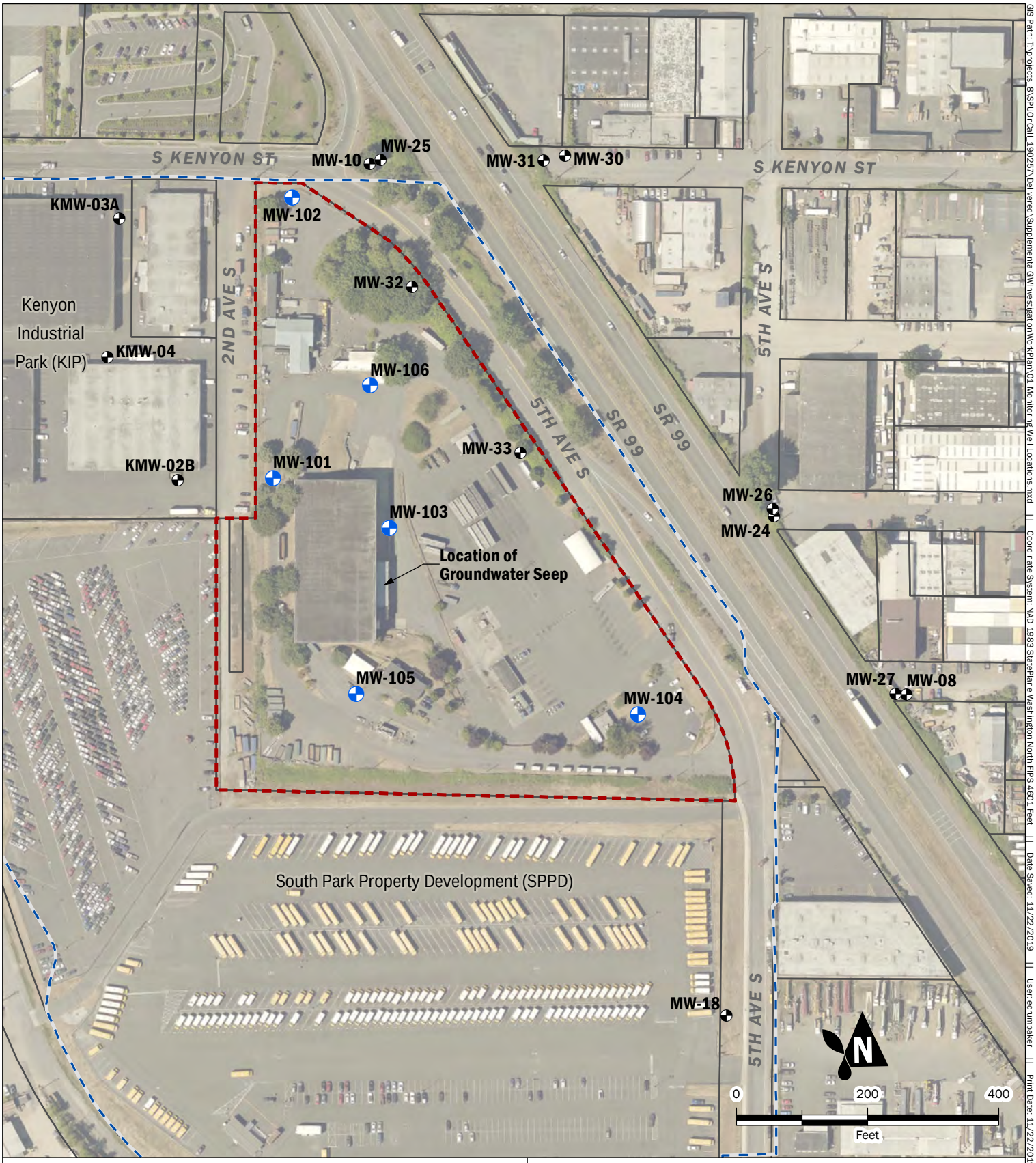
Steve Germiat, LHG
Principal Hydrogeologist
sgermiat@aspectconsulting.com

Attachments: Figure 1 – Monitoring Well Locations
Appendix A – ARI Inc. Laboratory Report (unvalidated results) for January 2020 Groundwater Sampling, ARI Inc.

cc: Jeff Neuner, Seattle Public Utilities
Olivia Williams, HDR Inc.

V:\190257 SPU On-Call Solid Waste\Deliverables\Progress Reports\No 2\Final\SRDS GW investigation_Progress Rpt. 2.docx

FIGURE



Monitoring Wells Installed for Supplemental Groundwater Investigation

Existing Monitoring Well Locations

Edge of Refuse

South Recycling & Disposal Station (SRDS), equivalent to South Transfer Station II (STSII)

King County Tax Parcel

Monitoring Well Locations

Work Plan for Supplemental Groundwater Investigation
South Recycling & Disposal Station, Seattle, WA

Aspect CONSULTING	NOV-2019	BY: SJG / EAC	FIGURE NO. 1
	PROJECT NO. 190257-001-01	REVISED BY: DU	

Basemap Layer Credits || Pictometry, King County

GIS Path: T:\projects_8\SPU\OnCall_190257\Delivered\SupplementalGWInvestigationWorkPlan\01 Monitoring Well Locations.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 11/22/2019 || User: ecrumbaker || Print Date: 11/22/2019

APPENDIX A

ARI Inc. Laboratory Report (unvalidated results) for January 2020

Analytical Resources, Incorporated
Analytical Chemists and Consultants

11 February 2020

Jeff Neuner
Seattle Public Utilities
700-5th Ave, Ste 4900, Box 34018
Seattle, WA 98124-4018

RE: South Park Landfill

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
20A0325	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

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 it entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006

PJLA Testing
Accreditation # 66169

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20A0325	Turn-around Requested: STD	Page: 1 of 1	
ARI Client Company: Aspect Consulting / SPU	Phone: (206) 838-5830	Date: 1/24/20	Ice Present?
Client Contact: Steve Germiat / Jeff Kenner		No. of Coolers: 5	Cooler Temps: See CRF
Client Project Name: South Park LF			
Client Project #: 140257	Samplers: DWU		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	NWTPH-Gx/Dx	Total metals EPA 6020A; Hg EPA 7470	Dissolved metals EPA 6020A; * Hg EPA 7470	SVOCs by EPA 8270D	low-level cPAHs by EPA 8270D-SIM	1,4 Dioxane EPA 8270D-SIM	PCBs EPA 8082A	VOCs by EPA 8260	Notes/Comments
MW-101-012420	1/24/20	~~0925~~ 1050	Water	15	X	X	X	X	X	X	X	X	* Field filtered
MW-102-012420		~~1520~~ 1530											
MW-103-012420		1400											
MW-104-012420		1205											
MW-105-012420		0925											
MW-106-012420		1225											
Trip Blank		–		2	X								
SC-012420		1610	Soil	8	X*	X		X			X	X	Dx, RCRA 8 metals

Comments/Special Instructions	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:
		David Unruh	Aspect Consulting	1/24/20 1810		Kenny Dang	ARI	1/24/2020 1812								

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-101-012420	20A0325-01	Water	24-Jan-2020 10:50	24-Jan-2020 18:12
MW-101-012420	20A0325-02	Water	24-Jan-2020 10:50	24-Jan-2020 18:12
MW-102-012420	20A0325-03	Water	24-Jan-2020 15:20	24-Jan-2020 18:12
MW-102-012420	20A0325-04	Water	24-Jan-2020 15:20	24-Jan-2020 18:12
MW-103-012420	20A0325-05	Water	24-Jan-2020 14:00	24-Jan-2020 18:12
MW-103-012420	20A0325-06	Water	24-Jan-2020 14:00	24-Jan-2020 18:12
MW-104-012420	20A0325-07	Water	24-Jan-2020 17:05	24-Jan-2020 18:12
MW-104-012420	20A0325-08	Water	24-Jan-2020 17:05	24-Jan-2020 18:12
MW-105-012420	20A0325-09	Water	24-Jan-2020 09:25	24-Jan-2020 18:12
MW-105-012420	20A0325-10	Water	24-Jan-2020 09:25	24-Jan-2020 18:12
MW-106-012420	20A0325-11	Water	24-Jan-2020 12:25	24-Jan-2020 18:12
MW-106-012420	20A0325-12	Water	24-Jan-2020 12:25	24-Jan-2020 18:12
Trip Blank	20A0325-13	Water	24-Jan-2020 09:25	24-Jan-2020 18:12

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Work Order Case Narrative

Client: Seattle Public Utilities
Project: South Park Landfill
Work Order: 20A0325

Sample receipt

Samples as listed on the preceding page were received 24-Jan-2020 18:12 under ARI work order 20A0325. For details regarding sample receipt, please refer to the Cooler Receipt Form.

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits except 4-Bromofluorobenzene which was out of control high in sample 20A0325-07 and is flagged.

The method blank(s) were clean at the reporting limits.

The LCS/LCSD percent recoveries and RPD were within control limits.

Volatiles - EPA Method SW8260C

The sample(s) were analyzed within the recommended holding times.

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Initial and continuing calibrations were within method requirements except Carbon Disulfide, Hexachloro-1,3-Butadiene and Dichlorofluoromethane which were out of control high and Chloromethane, Vinyl Acetate and trans-1,3-Dichloropropene which were out of control low. All samples which contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits except 1,2-Dichloromethane-d4 which was out of control low in samples 20A0325-03, 20A0325-05, 20A0325-09, 20A0325-11 and the method blank. For sample 20A0325-07 surrogates 1,2-Dichloromethane which was out of control low and 4-Bromofluorobenzene which was out of control high. All deviations are flagged.

The method blank(s) were clean at the reporting limits.

The LCS/LCSD percent recoveries and RPD were within control limits.

Semivolatiles - EPA Method SW8270D

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements except 2,4-Dichlorophenol, 3,3'-Dichlorobenzidine and surrogate 2,4, 6-Tribromophenol which were out of control high and 4-Nitrophenol which was out of control low. All samples which contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits except 2,4,6-Tribromophenol which was out of control high in the Initial calibration verification and is flagged. Surrogate Phenol-d5 was out of control low in samples 20A0325-01, 20A0325-03, 20A0325-05, 20A0325-07, 20A0325-09, 20A0325-11 and the method blank. All deviations are flagged.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits except Benzoic Acid, 4-Chloroaniline and 4-Nitrophenol which were out of control low and are flagged within the QC section of this report.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270D-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements except Phenanthrene which was out of control high in samples associated with sequence SIB0051. All samples which contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits except Fluoranthene-d10 which was out of control low in sample 20A0325-07 and is flagged.

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

1,4-Dioxane- EPA Method SW8270D

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Total Metals - EPA Method 6020A

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Sample specific QC was performed in association with sample 20A0325-01 in batch BIA0672. The duplicate RPD and matrix spike percent recoveries were within control limits.

Total Mercury - EPA Method 7470

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Sample specific QC was performed in association with sample 20A0325-01 in batch BIB0115. The duplicate RPD and matrix spike percent recovery were within control limits.

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Dissolved Metals - EPA Method 6020A

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Dissolved Mercury - EPA Method 7470

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Sample specific QC was performed in association with sample 20A3025-02. The duplicate RPD and matrix spike percent recovery were within control limits.

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WORK ORDER

20A0325

Client: Seattle Public Utilities | **Project Manager:** Shelly Fishel

Project: South Park Landfill | **Project Number:** South Park Landfill

Preservation Confirmation

Container ID	Container Type	pH	
20A0325-01 A	HDPE NM, 500 mL, 1:1 HNO3	<2	Pass
20A0325-01 B	VOA Vial, Clear, 40 mL, HCL		
20A0325-01 C	VOA Vial, Clear, 40 mL, HCL		
20A0325-01 D	VOA Vial, Clear, 40 mL, HCL		
20A0325-01 E	Glass NM, Amber, 1000 mL		
20A0325-01 F	Glass NM, Amber, 1000 mL		
20A0325-01 G	Glass NM, Amber, 500 mL		
20A0325-01 H	Glass NM, Amber, 500 mL		
20A0325-01 I	Glass NM, Amber, 500 mL		
20A0325-01 J	Glass NM, Amber, 500 mL		
20A0325-01 K	Glass NM, Amber, 500 mL		
20A0325-01 L	Glass NM, Amber, 500 mL		
20A0325-01 M	Glass NM, Amber, 500 mL		
20A0325-01 N	Glass NM, Amber, 500 mL		
20A0325-02 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2	Pass
20A0325-03 A	HDPE NM, 500 mL, 1:1 HNO3	<2	Pass
20A0325-03 B	VOA Vial, Clear, 40 mL, HCL		
20A0325-03 C	VOA Vial, Clear, 40 mL, HCL		
20A0325-03 D	VOA Vial, Clear, 40 mL, HCL		
20A0325-03 E	Glass NM, Amber, 1000 mL		
20A0325-03 F	Glass NM, Amber, 1000 mL		
20A0325-03 G	Glass NM, Amber, 500 mL		
20A0325-03 H	Glass NM, Amber, 500 mL		
20A0325-03 I	Glass NM, Amber, 500 mL		
20A0325-03 J	Glass NM, Amber, 500 mL		
20A0325-03 K	Glass NM, Amber, 500 mL		
20A0325-03 L	Glass NM, Amber, 500 mL		
20A0325-03 M	Glass NM, Amber, 500 mL		
20A0325-03 N	Glass NM, Amber, 500 mL		
20A0325-04 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2	Pass
20A0325-05 A	HDPE NM, 500 mL, 1:1 HNO3	<2	Pass
20A0325-05 B	VOA Vial, Clear, 40 mL, HCL		
20A0325-05 C	VOA Vial, Clear, 40 mL, HCL		
20A0325-05 D	VOA Vial, Clear, 40 mL, HCL		
20A0325-05 E	Glass NM, Amber, 1000 mL		

Reviewed By

Date

WORK ORDER

20A0325

Client: Seattle Public Utilities | **Project Manager:** Shelly Fishel

Project: South Park Landfill | **Project Number:** South Park Landfill

20A0325-05 F	Glass NM, Amber, 1000 mL		
20A0325-05 G	Glass NM, Amber, 500 mL		
20A0325-05 H	Glass NM, Amber, 500 mL		
20A0325-05 I	Glass NM, Amber, 500 mL		
20A0325-05 J	Glass NM, Amber, 500 mL		
20A0325-05 K	Glass NM, Amber, 500 mL		
20A0325-05 L	Glass NM, Amber, 500 mL		
20A0325-05 M	Glass NM, Amber, 500 mL		
20A0325-05 N	Glass NM, Amber, 500 mL		
20A0325-06 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2	Pass
20A0325-07 A	HDPE NM, 500 mL, 1:1 HNO3	<2	Pass
20A0325-07 B	VOA Vial, Clear, 40 mL, HCL		
20A0325-07 C	VOA Vial, Clear, 40 mL, HCL		
20A0325-07 D	VOA Vial, Clear, 40 mL, HCL		
20A0325-07 E	Glass NM, Amber, 1000 mL		
20A0325-07 F	Glass NM, Amber, 1000 mL		
20A0325-07 G	Glass NM, Amber, 500 mL		
20A0325-07 H	Glass NM, Amber, 500 mL		
20A0325-07 I	Glass NM, Amber, 500 mL		
20A0325-07 J	Glass NM, Amber, 500 mL		
20A0325-07 K	Glass NM, Amber, 500 mL		
20A0325-07 L	Glass NM, Amber, 500 mL		
20A0325-07 M	Glass NM, Amber, 500 mL		
20A0325-07 N	Glass NM, Amber, 500 mL		
20A0325-08 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2	Pass
20A0325-09 A	HDPE NM, 500 mL, 1:1 HNO3	<2	Pass
20A0325-09 B	VOA Vial, Clear, 40 mL, HCL		
20A0325-09 C	VOA Vial, Clear, 40 mL, HCL		
20A0325-09 D	VOA Vial, Clear, 40 mL, HCL		
20A0325-09 E	Glass NM, Amber, 1000 mL		
20A0325-09 F	Glass NM, Amber, 1000 mL		
20A0325-09 G	Glass NM, Amber, 500 mL		
20A0325-09 H	Glass NM, Amber, 500 mL		
20A0325-09 I	Glass NM, Amber, 500 mL		
20A0325-09 J	Glass NM, Amber, 500 mL		
20A0325-09 K	Glass NM, Amber, 500 mL		
20A0325-09 L	Glass NM, Amber, 500 mL		

Reviewed By

Date

WORK ORDER

20A0325

Client: Seattle Public Utilities | **Project Manager:** Shelly Fishel

Project: South Park Landfill | **Project Number:** South Park Landfill

20A0325-09 M	Glass NM, Amber, 500 mL		
20A0325-09 N	Glass NM, Amber, 500 mL		
20A0325-10 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2	Pass
20A0325-11 A	HDPE NM, 500 mL, 1:1 HNO3	<2	Pass
20A0325-11 B	VOA Vial, Clear, 40 mL, HCL		
20A0325-11 C	VOA Vial, Clear, 40 mL, HCL		
20A0325-11 D	VOA Vial, Clear, 40 mL, HCL		
20A0325-11 E	Glass NM, Amber, 1000 mL		
20A0325-11 F	Glass NM, Amber, 1000 mL		
20A0325-11 G	Glass NM, Amber, 500 mL		
20A0325-11 H	Glass NM, Amber, 500 mL		
20A0325-11 I	Glass NM, Amber, 500 mL		
20A0325-11 J	Glass NM, Amber, 500 mL		
20A0325-11 K	Glass NM, Amber, 500 mL		
20A0325-11 L	Glass NM, Amber, 500 mL		
20A0325-11 M	Glass NM, Amber, 500 mL		
20A0325-11 N	Glass NM, Amber, 500 mL		
20A0325-12 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2	Pass
20A0325-13 A	VOA Vial, Clear, 40 mL, HCL		
20A0325-13 B	VOA Vial, Clear, 40 mL, HCL		
20A0325-13 C	VOA Vial, Clear, 40 mL, HCL		
20A0325-13 D	VOA Vial, Clear, 40 mL, HCL		
20A0325-14 A	Glass WM, Clear, 8 oz		
20A0325-14 B	Glass WM, Clear, 4 oz		
20A0325-14 C	Glass WM w/septa, Clear, 2 oz		
20A0325-14 D	VOA Vial, Clear, 40 mL, NaHSO4	KD 1/27/20	
20A0325-14 E	VOA Vial, Clear, 40 mL, NaHSO4		
20A0325-14 F	VOA Vial, Clear, 40 mL, NaHSO4		
20A0325-14 G	VOA Vial, Clear, 40 mL, MeOH		
20A0325-14 H	VOA Vial, Clear, 40 mL, MeOH		

JBw
Preservation Confirmed By

01/25/2020
Date

Reviewed By

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Aspect
COC No(s): 6 NA
Assigned ARI Job No: 20A0325

Project Name: South Park LF
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1812 — 1.5 2.5 1.9 2.7 0.8

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: DOO S206

Cooler Accepted by: KD Date: 1/24/2020 Time: 1812

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?	JBm	YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?	JBm	YES	NO
Date VOC Trip Blank was made at ARI	NA	01/16/2020	

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: JBm Date: 01/25/2020 Time: 1012 Labels checked by: JBm

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

4 Trip Blanks in total were received, instead of the 2 listed on the Clients COC.

By: JBm Date: 01/25/2020

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 10:50
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 11:54

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-01 B
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	**0.21**	ug/L	
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**4.25**	ug/L	J
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	**0.04**	ug/L	J
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	**0.21**	ug/L	
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	**1.83**	ug/L	J
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**6.81**	ug/L	
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	**0.03**	ug/L	J
Trichloroethene	79-01-6	1	0.05	0.20	**10.1**	ug/L	
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 10:50

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 11:54

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.02	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.02	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 10:50

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 11:54

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*111*	*%*	
Surrogate: Toluene-d8		*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*93.0*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*102*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 01/24/2020 10:50

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 11:54

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-01 B

Preparation Batch: BIA0521 — Sample Size: 10 mL

Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*93.0*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 10:50

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 18:03

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-01 F 01

Preparation Batch: BIA0595 — Sample Size: 1000 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	0.01	0.2	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	0.03	0.2	ND	ug/L	U
2-Chlorophenol	95-57-8	1	0.03	0.2	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.03	0.2	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.03	0.2	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.03	0.2	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	0.02	0.2	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	0.03	0.2	ND	ug/L	U
2-Methylphenol	95-48-7	1	0.03	0.2	ND	ug/L	U
Hexachloroethane	67-72-1	1	0.04	0.2	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	0.04	0.2	ND	ug/L	U
4-Methylphenol	106-44-5	1	0.03	0.2	ND	ug/L	U
Nitrobenzene	98-95-3	1	0.03	0.2	ND	ug/L	U
Isophorone	78-59-1	1	0.03	0.2	ND	ug/L	U
2-Nitrophenol	88-75-5	1	0.04	1.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	0.3	1.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	0.03	0.2	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	0.1	1.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.03	0.2	ND	ug/L	U
Benzoic acid	65-85-0	1	0.1	2.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	0.04	1.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	0.04	0.2	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	0.1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	0.1	1.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	0.2	1.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	0.1	1.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	0.03	0.2	ND	ug/L	U
2-Nitroaniline	88-74-4	1	0.2	1.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	0.04	0.2	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	0.2	1.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	0.2	1.0	ND	ug/L	U
2,4-Dinitrophenol	51-28-5	1	0.2	2.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	0.06	1.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	0.1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	0.02	0.2	ND	ug/L	U
Diethyl phthalate	84-66-2	1	0.06	0.2	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 10:50

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 18:03

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
4-Nitroaniline	100-01-6	1	0.2	1.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	0.4	2.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	0.03	0.2	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	0.02	0.2	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	0.04	0.2	ND	ug/L	U
Pentachlorophenol	87-86-5	1	0.1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	0.04	0.2	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	0.05	0.2	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	0.07	0.2	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	0.3	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	0.2	0.2	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	0.05	0.2	ND	ug/L	U
Surrogate: 2-Fluorophenol				*30-160 %*	*40.6*	*%*	
Surrogate: Phenol-d5				*30-160 %*	*21.4*	*%*	*
Surrogate: 2-Chlorophenol-d4				*30-160 %*	*63.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*30-160 %*	*58.8*	*%*	
Surrogate: Nitrobenzene-d5				*30-160 %*	*61.8*	*%*	
Surrogate: 2-Fluorobiphenyl				*30-160 %*	*64.6*	*%*	
Surrogate: 2,4,6-Tribromophenol				*30-160 %*	*89.8*	*%*	Q
Surrogate: p-Terphenyl-d14				*30-160 %*	*75.2*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 10:50
Instrument: NT11 Analyst: VTS — Analyzed: 02/01/2020 13:43

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-01 H 01
Preparation Batch: BIA0542 — Sample Size: 500 mL
Prepared: 27-Jan-2020 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 20A0325-01 H 01
Cleanup Batch: CIA0212 — Initial Volume: 0.5 mL
Cleaned: 30-Jan-2020 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.001	0.010	**0.005**	ug/L	J
2-Methylnaphthalene	91-57-6	1	0.001	0.010	**0.003**	ug/L	J
1-Methylnaphthalene	90-12-0	1	0.0009	0.010	**0.002**	ug/L	J
2-Chloronaphthalene	91-58-7	1	0.001	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.002	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.003	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.002	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.002	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.001	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.001	0.010	ND	ug/L	U
Carbazole	86-74-8	1	0.001	0.010	**0.018**	ug/L	
Fluoranthene	206-44-0	1	0.002	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.001	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.001**	ug/L	J
Chrysene	218-01-9	1	0.0009	0.010	**0.002**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	**0.001**	ug/L	J
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.002	0.010	ND	ug/L	U
Benzofluoranthenes, Total		1	0.004	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Perylene	1985-5-0	1	0.006	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*73.2*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*81.6*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*89.5*	*%*	

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 13:32

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) — Extract ID: 20A0325-01 G 01
Preparation Batch: BIA0540 — Sample Size: 460 mL
Prepared: 30-Jan-2020 — Final Volume: 1 mL

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 10:50

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 13:32

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.04	0.2	**0.05**	ug/L	J
Surrogate: 1,4-Dioxane-d8				*33.6-120 %*	*69.9*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/24/2020 10:50

Instrument: FID4 Analyst: JGR — Analyzed: 01/31/2020 10:25

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-01 I 01

Preparation Batch: BIA0587 — Sample Size: 500 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*87.4*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/24/2020 10:50

Instrument: ECD7 Analyst: JGR — Analyzed: 01/30/2020 14:15

Sample Preparation:	Preparation Method: EPA 3510C SepF		Extract ID: 20A0325-01 E 01
	Preparation Batch: BIA0568	Sample Size: 1000 mL	
	Prepared: 28-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 20A0325-01 E 01
	Cleanup Batch: CIA0203	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:20A0325-01 E 01
	Cleanup Batch: CIA0201	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:20A0325-01 E 01
	Cleanup Batch: CIA0202	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.002	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.002	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.002	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.002	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1262	37324-23-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1268	11100-14-4	1	0.003	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl				*29-120 %*	*60.1*	*%*	
Surrogate: Tetrachlorometaxylene				*32-120 %*	*48.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*29-120 %*	*58.3*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*32-120 %*	*47.4*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Metals and Metallic Compounds

Method: EPA 6020A — Sampled: 01/24/2020 10:50
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 21:12

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-01 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	1	0.130	0.500	ND	ug/L	U
Iron	7439-89-6	1	6.27	20.0	**1790**	ug/L	
Lead	7439-92-1	1	0.0680	0.100	**0.480**	ug/L	
Manganese	7439-96-5	1	0.0850	0.500	**34.2**	ug/L	

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Metals and Metallic Compounds

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 10:50
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 21:12

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-01 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0220	0.200	**3.72**	ug/L	
Cadmium	7440-43-9	1	0.0300	0.100	**0.511**	ug/L	
Copper	7440-50-8	1	0.340	0.500	**5.31**	ug/L	
Nickel	7440-02-0	1	0.0500	0.500	**9.29**	ug/L	
Zinc	7440-66-6	1	0.940	4.00	**95.4**	ug/L	

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-01 (Water)

Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/24/2020 10:50

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 15:46

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-01 A

Preparation Batch: BIB0115 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000010	0.000020	ND	mg/L	U

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A — Sampled: 01/24/2020 10:50
Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:19

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-02 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.130	0.500	ND	ug/L	U
Iron, Dissolved	7439-89-6	1	6.27	20.0	**842**	ug/L	
Lead, Dissolved	7439-92-1	1	0.0680	0.100	**0.101**	ug/L	

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 19:05

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-02 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Manganese, Dissolved	7439-96-5	1	0.0850	0.500	**34.9**	ug/L	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 10:50

Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:19

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-02 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**2.72**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.0300	0.100	**0.524**	ug/L	
Copper, Dissolved	7440-50-8	1	0.340	0.500	**4.88**	ug/L	
Zinc, Dissolved	7440-66-6	1	0.940	4.00	**97.0**	ug/L	

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 23:03

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-02 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nickel, Dissolved	7440-02-0	2	0.100	1.00	**9.32**	ug/L	D

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-101-012420

20A0325-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A — Sampled: 01/24/2020 10:50

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 16:31

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-02 A

Preparation Batch: BIB0116 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000010	0.000020	ND	mg/L	U

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 15:20
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:14

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-03 B
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	**0.52**	ug/L	
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**2.32**	ug/L	J
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	**0.07**	ug/L	J
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	**0.07**	ug/L	J
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**0.84**	ug/L	
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	**0.11**	ug/L	J
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.05	0.20	**4.18**	ug/L	
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	**0.06**	ug/L	J
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 15:20

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	**0.25**	ug/L	
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	**0.28**	ug/L	
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	**0.03**	ug/L	J
s-Butylbenzene	135-98-8	1	0.02	0.20	**0.45**	ug/L	
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	**0.08**	ug/L	J
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.02	0.20	**0.03**	ug/L	J
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	**0.71**	ug/L	
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 15:20

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:14

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*76.5*	*%*	*
Surrogate: Toluene-d8		*80-120 %*	*95.7*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*114*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*106*	*%*	

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 01/24/2020 15:20
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:14

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-03 B
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	**129**	ug/L	
HC ID: GAS						
Surrogate: Toluene-d8			*80-120 %*	*95.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*114*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 15:20

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 18:40

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-03 F 01

Preparation Batch: BIA0595 — Sample Size: 1000 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	0.01	0.2	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	0.03	0.2	ND	ug/L	U
2-Chlorophenol	95-57-8	1	0.03	0.2	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.03	0.2	**0.06**	ug/L	J
1,4-Dichlorobenzene	106-46-7	1	0.03	0.2	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.03	0.2	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	0.02	0.2	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	0.03	0.2	ND	ug/L	U
2-Methylphenol	95-48-7	1	0.03	0.2	ND	ug/L	U
Hexachloroethane	67-72-1	1	0.04	0.2	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	0.04	0.2	ND	ug/L	U
4-Methylphenol	106-44-5	1	0.03	0.2	ND	ug/L	U
Nitrobenzene	98-95-3	1	0.03	0.2	ND	ug/L	U
Isophorone	78-59-1	1	0.03	0.2	ND	ug/L	U
2-Nitrophenol	88-75-5	1	0.04	1.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	0.3	1.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	0.03	0.2	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	0.1	1.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.03	0.2	**0.4**	ug/L	
Benzoic acid	65-85-0	1	0.1	2.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	0.04	1.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	0.04	0.2	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	0.1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	0.1	1.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	0.2	1.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	0.1	1.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	0.03	0.2	ND	ug/L	U
2-Nitroaniline	88-74-4	1	0.2	1.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	0.04	0.2	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	0.2	1.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	0.2	1.0	ND	ug/L	U
2,4-Dinitrophenol	51-28-5	1	0.2	2.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	0.06	1.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	0.1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	0.02	0.2	ND	ug/L	U
Diethyl phthalate	84-66-2	1	0.06	0.2	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 15:20

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 18:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
4-Nitroaniline	100-01-6	1	0.2	1.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	0.4	2.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	0.03	0.2	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	0.02	0.2	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	0.04	0.2	ND	ug/L	U
Pentachlorophenol	87-86-5	1	0.1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	0.04	0.2	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	0.05	0.2	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	0.07	0.2	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	0.3	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	0.2	0.2	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	0.05	0.2	ND	ug/L	U
Surrogate: 2-Fluorophenol				*30-160 %*	*44.4*	*%*	
Surrogate: Phenol-d5				*30-160 %*	*24.9*	*%*	*
Surrogate: 2-Chlorophenol-d4				*30-160 %*	*70.9*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*30-160 %*	*64.1*	*%*	
Surrogate: Nitrobenzene-d5				*30-160 %*	*68.0*	*%*	
Surrogate: 2-Fluorobiphenyl				*30-160 %*	*73.0*	*%*	
Surrogate: 2,4,6-Tribromophenol				*30-160 %*	*102*	*%*	Q
Surrogate: p-Terphenyl-d14				*30-160 %*	*75.5*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 15:20
Instrument: NT11 Analyst: VTS — Analyzed: 02/01/2020 14:13

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-03 H 01
Preparation Batch: BIA0542 — Sample Size: 500 mL
Prepared: 27-Jan-2020 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 20A0325-03 H 01
Cleanup Batch: CIA0212 — Initial Volume: 0.5 mL
Cleaned: 30-Jan-2020 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.001	0.010	**0.005**	ug/L	J
2-Methylnaphthalene	91-57-6	1	0.001	0.010	**0.005**	ug/L	J
1-Methylnaphthalene	90-12-0	1	0.0009	0.010	**0.009**	ug/L	J
2-Chloronaphthalene	91-58-7	1	0.001	0.010	**0.028**	ug/L	
Acenaphthylene	208-96-8	1	0.002	0.010	**0.008**	ug/L	J
Acenaphthene	83-32-9	1	0.003	0.010	**0.218**	ug/L	
Dibenzofuran	132-64-9	1	0.002	0.010	**0.003**	ug/L	J
Fluorene	86-73-7	1	0.002	0.010	**0.381**	ug/L	
Phenanthrene	85-01-8	1	0.001	0.010	**0.006**	ug/L	J
Anthracene	120-12-7	1	0.001	0.010	ND	ug/L	U
Carbazole	86-74-8	1	0.001	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.002	0.010	**0.014**	ug/L	
Pyrene	129-00-0	1	0.001	0.010	**0.023**	ug/L	
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.002**	ug/L	J
Chrysene	218-01-9	1	0.0009	0.010	**0.009**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	**0.002**	ug/L	J
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.002	0.010	ND	ug/L	U
Benzofluoranthenes, Total		1	0.004	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Perylene	1985-5-0	1	0.006	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*86.4*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*91.2*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*98.1*	*%*	

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 13:58

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) — Extract ID: 20A0325-03 G 01
Preparation Batch: BIA0540 — Sample Size: 500 mL
Prepared: 30-Jan-2020 — Final Volume: 1 mL

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 15:20

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 13:58

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.04	0.2	ND	ug/L	U
Surrogate: 1,4-Dioxane-d8				*33.6-120 %*	*60.2*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/24/2020 15:20

Instrument: FID4 Analyst: JGR — Analyzed: 01/31/2020 10:44

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-03 I 01

Preparation Batch: BIA0587 — Sample Size: 500 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	**0.618**	mg/L	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	**0.256**	mg/L	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*90.8*	*%*	

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/24/2020 15:20

Instrument: ECD7 Analyst: JGR — Analyzed: 01/30/2020 14:36

Sample Preparation:	Preparation Method: EPA 3510C SepF		Extract ID: 20A0325-03 E 01
	Preparation Batch: BIA0568	Sample Size: 1000 mL	
	Prepared: 28-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 20A0325-03 E 01
	Cleanup Batch: CIA0203	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:20A0325-03 E 01
	Cleanup Batch: CIA0201	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:20A0325-03 E 01
	Cleanup Batch: CIA0202	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.002	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.002	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.002	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.002	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1262	37324-23-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1268	11100-14-4	1	0.003	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl				*29-120 %*	*45.0*	*%*	
Surrogate: Tetrachlorometaxylene				*32-120 %*	*41.4*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*29-120 %*	*38.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*32-120 %*	*44.4*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Metals and Metallic Compounds

Method: EPA 6020A — Sampled: 01/24/2020 15:20
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 20:46

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-03 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	1	0.130	0.500	**0.599**	ug/L	
Iron	7439-89-6	1	6.27	20.0	**3280**	ug/L	
Lead	7439-92-1	1	0.0680	0.100	**0.0820**	ug/L	J
Manganese	7439-96-5	1	0.0850	0.500	**173**	ug/L	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Metals and Metallic Compounds

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 15:20

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 20:46

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-03 A 01

Preparation Batch: BIA0672 — Sample Size: 25 mL

Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0220	0.200	**0.691**	ug/L	
Cadmium	7440-43-9	1	0.0300	0.100	ND	ug/L	U
Copper	7440-50-8	1	0.340	0.500	ND	ug/L	U
Nickel	7440-02-0	1	0.0500	0.500	**0.870**	ug/L	
Zinc	7440-66-6	1	0.820	4.00	**10.1**	ug/L	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03 (Water)

Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/24/2020 15:20

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 15:55

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-03 A

Preparation Batch: BIB0115 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000010	0.000020	ND	mg/L	U

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 15:20

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 14:10

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-03RE1 C

Preparation Batch: BIA0527 — Sample Size: 10 mL

Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	**1.02**	ug/L	
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**3.30**	ug/L	J
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	**0.12**	ug/L	J
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	**0.10**	ug/L	J
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	**0.84**	ug/L	J
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**1.17**	ug/L	
Chloroform	67-66-3	1	0.03	0.20	**0.04**	ug/L	J
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	**0.21**	ug/L	
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	**0.03**	ug/L	J
Trichloroethene	79-01-6	1	0.05	0.20	**4.67**	ug/L	
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	**0.08**	ug/L	J
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 15:20

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 14:10

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	**0.30**	ug/L	
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	**0.34**	ug/L	
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	**0.05**	ug/L	J
s-Butylbenzene	135-98-8	1	0.02	0.20	**0.56**	ug/L	
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	**0.12**	ug/L	J
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	**0.07**	ug/L	J
n-Butylbenzene	104-51-8	1	0.02	0.20	**0.06**	ug/L	J
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	**0.06**	ug/L	J
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	**0.68**	ug/L	
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	**0.14**	ug/L	J
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-03RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 15:20

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 14:10

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*103*	*%*	
Surrogate: Toluene-d8		*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*101*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*97.6*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A — Sampled: 01/24/2020 15:20
Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:24

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-04 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.130	0.500	**0.561**	ug/L	
Iron, Dissolved	7439-89-6	1	6.27	20.0	**3500**	ug/L	
Lead, Dissolved	7439-92-1	1	0.0680	0.100	ND	ug/L	U

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 19:10

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-04 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Manganese, Dissolved	7439-96-5	1	0.0850	0.500	**180**	ug/L	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 15:20

Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:24

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-04 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**0.775**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.0300	0.100	ND	ug/L	U
Copper, Dissolved	7440-50-8	1	0.340	0.500	ND	ug/L	U
Zinc, Dissolved	7440-66-6	1	0.820	4.00	**10.4**	ug/L	

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 19:10

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-04 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nickel, Dissolved	7440-02-0	1	0.0500	0.500	**0.847**	ug/L	

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-102-012420

20A0325-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A — Sampled: 01/24/2020 15:20

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 16:46

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-04 A

Preparation Batch: BIB0116 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000010	0.000020	**0.000013**	mg/L	J

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 14:00
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:34

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-05 C
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	**0.09**	ug/L	J
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	**0.30**	ug/L	
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	**0.19**	ug/L	J
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**2.38**	ug/L	
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	**0.06**	ug/L	J
Trichloroethene	79-01-6	1	0.05	0.20	**0.17**	ug/L	J
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 14:00

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:34

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.02	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.02	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 14:00

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:34

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*72.1*	*%*	*
Surrogate: Toluene-d8		*80-120 %*	*94.5*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*111*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*107*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 01/24/2020 14:00

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:34

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-05 C

Preparation Batch: BIA0521 — Sample Size: 10 mL

Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*94.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*111*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 14:00

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 19:15

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-05 F 01

Preparation Batch: BIA0595 — Sample Size: 1000 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	0.01	0.2	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	0.03	0.2	ND	ug/L	U
2-Chlorophenol	95-57-8	1	0.03	0.2	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.03	0.2	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.03	0.2	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.03	0.2	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	0.02	0.2	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	0.03	0.2	ND	ug/L	U
2-Methylphenol	95-48-7	1	0.03	0.2	ND	ug/L	U
Hexachloroethane	67-72-1	1	0.04	0.2	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	0.04	0.2	ND	ug/L	U
4-Methylphenol	106-44-5	1	0.03	0.2	ND	ug/L	U
Nitrobenzene	98-95-3	1	0.03	0.2	ND	ug/L	U
Isophorone	78-59-1	1	0.03	0.2	ND	ug/L	U
2-Nitrophenol	88-75-5	1	0.04	1.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	0.3	1.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	0.03	0.2	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	0.1	1.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.03	0.2	ND	ug/L	U
Benzoic acid	65-85-0	1	0.1	2.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	0.04	1.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	0.04	0.2	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	0.1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	0.1	1.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	0.2	1.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	0.1	1.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	0.03	0.2	ND	ug/L	U
2-Nitroaniline	88-74-4	1	0.2	1.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	0.04	0.2	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	0.2	1.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	0.2	1.0	ND	ug/L	U
2,4-Dinitrophenol	51-28-5	1	0.2	2.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	0.06	1.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	0.1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	0.02	0.2	ND	ug/L	U
Diethyl phthalate	84-66-2	1	0.06	0.2	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 14:00

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 19:15

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
4-Nitroaniline	100-01-6	1	0.2	1.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	0.4	2.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	0.03	0.2	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	0.02	0.2	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	0.04	0.2	ND	ug/L	U
Pentachlorophenol	87-86-5	1	0.1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	0.04	0.2	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	0.05	0.2	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	0.07	0.2	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	0.3	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	0.2	0.2	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	0.05	0.2	ND	ug/L	U
Surrogate: 2-Fluorophenol				*30-160 %*	*44.0*	*%*	
Surrogate: Phenol-d5				*30-160 %*	*22.5*	*%*	*
Surrogate: 2-Chlorophenol-d4				*30-160 %*	*68.7*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*30-160 %*	*62.2*	*%*	
Surrogate: Nitrobenzene-d5				*30-160 %*	*64.8*	*%*	
Surrogate: 2-Fluorobiphenyl				*30-160 %*	*68.4*	*%*	
Surrogate: 2,4,6-Tribromophenol				*30-160 %*	*91.7*	*%*	Q
Surrogate: p-Terphenyl-d14				*30-160 %*	*71.7*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 14:00
Instrument: NT11 Analyst: VTS — Analyzed: 02/01/2020 14:42

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-05 H 01
Preparation Batch: BIA0542 — Sample Size: 500 mL
Prepared: 27-Jan-2020 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 20A0325-05 H 01
Cleanup Batch: CIA0212 — Initial Volume: 0.5 mL
Cleaned: 30-Jan-2020 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.001	0.010	**0.003**	ug/L	J
2-Methylnaphthalene	91-57-6	1	0.001	0.010	**0.001**	ug/L	J
1-Methylnaphthalene	90-12-0	1	0.0009	0.010	**0.003**	ug/L	J
2-Chloronaphthalene	91-58-7	1	0.001	0.010	**0.002**	ug/L	J
Acenaphthylene	208-96-8	1	0.002	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.003	0.010	**0.010**	ug/L	J
Dibenzofuran	132-64-9	1	0.002	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.002	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.001	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.001	0.010	ND	ug/L	U
Carbazole	86-74-8	1	0.001	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.002	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.001	0.010	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.001**	ug/L	J
Chrysene	218-01-9	1	0.0009	0.010	**0.002**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.002	0.010	ND	ug/L	U
Benzofluoranthenes, Total		1	0.004	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Perylene	1985-5-0	1	0.006	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*65.8*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*73.4*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*81.1*	*%*	

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 14:23

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) — Extract ID: 20A0325-05 G 01
Preparation Batch: BIA0540 — Sample Size: 460 mL
Prepared: 30-Jan-2020 — Final Volume: 1 mL

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 14:00

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 14:23

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.04	0.2	**0.07**	ug/L	J
Surrogate: 1,4-Dioxane-d8				*33.6-120 %*	*63.4*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/24/2020 14:00

Instrument: FID4 Analyst: JGR — Analyzed: 01/31/2020 11:04

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-05 I 01

Preparation Batch: BIA0587 — Sample Size: 500 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	**0.232**	mg/L	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*87.3*	*%*	

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/24/2020 14:00

Instrument: ECD7 Analyst: JGR — Analyzed: 01/30/2020 14:57

Sample Preparation:	Preparation Method: EPA 3510C SepF		Extract ID: 20A0325-05 E 01
	Preparation Batch: BIA0568	Sample Size: 1000 mL	
	Prepared: 28-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 20A0325-05 E 01
	Cleanup Batch: CIA0203	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:20A0325-05 E 01
	Cleanup Batch: CIA0201	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:20A0325-05 E 01
	Cleanup Batch: CIA0202	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.002	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.002	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.002	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.002	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1262	37324-23-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1268	11100-14-4	1	0.003	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl				*29-120 %*	*60.5*	*%*	
Surrogate: Tetrachlorometaxylene				*32-120 %*	*51.6*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*29-120 %*	*54.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*32-120 %*	*50.1*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Metals and Metallic Compounds

Method: EPA 6020A — Sampled: 01/24/2020 14:00
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 20:51

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-05 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	1	0.130	0.500	**0.246**	ug/L	J
Iron	7439-89-6	1	6.27	20.0	**928**	ug/L	
Lead	7439-92-1	1	0.0680	0.100	ND	ug/L	U
Manganese	7439-96-5	1	0.0850	0.500	**216**	ug/L	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Metals and Metallic Compounds

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 14:00
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 20:51

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-05 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0220	0.200	**2.76**	ug/L	
Cadmium	7440-43-9	1	0.0300	0.100	ND	ug/L	U
Copper	7440-50-8	1	0.340	0.500	**0.545**	ug/L	
Nickel	7440-02-0	1	0.0500	0.500	**6.63**	ug/L	
Zinc	7440-66-6	1	0.820	4.00	**3.19**	ug/L	J

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05 (Water)

Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/24/2020 14:00

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 15:58

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-05 A

Preparation Batch: BIB0115 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000010	0.000020	**0.000012**	mg/L	J

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 14:00
Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 14:38

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-05RE1 B
Preparation Batch: BIA0527 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	**0.14**	ug/L	J
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**5.07**	ug/L	
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	**0.66**	ug/L	Q
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	**0.32**	ug/L	
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**3.62**	ug/L	
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	**0.07**	ug/L	J
Trichloroethene	79-01-6	1	0.05	0.20	**0.21**	ug/L	
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

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700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 14:00

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 14:38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	**0.03**	ug/L	J
s-Butylbenzene	135-98-8	1	0.02	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	**0.05**	ug/L	J
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	**0.05**	ug/L	J
n-Butylbenzene	104-51-8	1	0.02	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	**0.11**	ug/L	J
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-05RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 14:00

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 14:38

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*96.5*	*%*	
Surrogate: Toluene-d8		*80-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*99.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*98.0*	*%*	

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700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A — Sampled: 01/24/2020 14:00
Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:29

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-06 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.130	0.500	**0.285**	ug/L	J
Iron, Dissolved	7439-89-6	1	6.27	20.0	**933**	ug/L	
Lead, Dissolved	7439-92-1	1	0.0680	0.100	ND	ug/L	U

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 19:15

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-06 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Manganese, Dissolved	7439-96-5	1	0.0850	0.500	**226**	ug/L	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 14:00

Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:29

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-06 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**3.06**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.0300	0.100	ND	ug/L	U
Copper, Dissolved	7440-50-8	1	0.340	0.500	ND	ug/L	U
Zinc, Dissolved	7440-66-6	1	0.820	4.00	**2.80**	ug/L	J

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 19:15

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-06 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nickel, Dissolved	7440-02-0	1	0.0500	0.500	**6.38**	ug/L	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-103-012420

20A0325-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A — Sampled: 01/24/2020 14:00

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 16:49

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-06 A

Preparation Batch: BIB0116 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000010	0.000020	**0.000012**	mg/L	J

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 17:05
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:55

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-07 B
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	**0.42**	ug/L	
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**2.07**	ug/L	J
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	**0.19**	ug/L	J
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	**0.18**	ug/L	J
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	**0.21**	ug/L	
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**0.25**	ug/L	
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	**4.37**	ug/L	
Trichloroethene	79-01-6	1	0.05	0.20	**0.28**	ug/L	
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	**0.32**	ug/L	
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 17:05

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:55

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	**3.73**	ug/L	
Ethylbenzene	100-41-4	1	0.04	0.20	**1.15**	ug/L	
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	**0.63**	ug/L	
o-Xylene	95-47-6	1	0.03	0.20	**0.21**	ug/L	
Xylenes, total	1330-20-7	1	0.09	0.60	**0.84**	ug/L	
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	**31.5**	ug/L	
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	**26.8**	ug/L	
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	**1.02**	ug/L	
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	**0.12**	ug/L	J
s-Butylbenzene	135-98-8	1	0.02	0.20	**6.61**	ug/L	
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	**0.14**	ug/L	J
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	**1.38**	ug/L	
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	**8.31**	ug/L	
n-Butylbenzene	104-51-8	1	0.02	0.20	**3.94**	ug/L	
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	**16.8**	ug/L	
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	**0.22**	ug/L	J
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 17:05

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:55

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*72.7*	*%*	*
Surrogate: Toluene-d8		*80-120 %*	*96.0*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*122*	*%*	*
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*108*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 01/24/2020 17:05

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 12:55

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-07 B

Preparation Batch: BIA0521 — Sample Size: 10 mL

Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	**1930**	ug/L	
HC ID: GAS						
Surrogate: Toluene-d8			*80-120 %*	*96.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*122*	*%*	*

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 17:05

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 19:51

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-07 F 01

Preparation Batch: BIA0595 — Sample Size: 1000 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	0.01	0.2	**1.1**	ug/L	
bis(2-chloroethyl) ether	111-44-4	1	0.03	0.2	ND	ug/L	U
2-Chlorophenol	95-57-8	1	0.03	0.2	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.03	0.2	**1.4**	ug/L	
1,4-Dichlorobenzene	106-46-7	1	0.03	0.2	**7.9**	ug/L	
1,2-Dichlorobenzene	95-50-1	1	0.03	0.2	**14.9**	ug/L	
Benzyl Alcohol	100-51-6	1	0.02	0.2	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	0.03	0.2	ND	ug/L	U
2-Methylphenol	95-48-7	1	0.03	0.2	ND	ug/L	U
Hexachloroethane	67-72-1	1	0.04	0.2	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	0.04	0.2	ND	ug/L	U
4-Methylphenol	106-44-5	1	0.03	0.2	ND	ug/L	U
Nitrobenzene	98-95-3	1	0.03	0.2	ND	ug/L	U
Isophorone	78-59-1	1	0.03	0.2	ND	ug/L	U
2-Nitrophenol	88-75-5	1	0.04	1.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	0.3	1.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	0.03	0.2	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	0.1	1.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.03	0.2	ND	ug/L	U
Benzoic acid	65-85-0	1	0.1	2.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	0.04	1.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	0.04	0.2	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	0.1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	0.1	1.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	0.2	1.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	0.1	1.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	0.03	0.2	ND	ug/L	U
2-Nitroaniline	88-74-4	1	0.2	1.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	0.04	0.2	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	0.2	1.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	0.2	1.0	ND	ug/L	U
2,4-Dinitrophenol	51-28-5	1	0.2	2.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	0.06	1.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	0.1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	0.02	0.2	ND	ug/L	U
Diethyl phthalate	84-66-2	1	0.06	0.2	**3.6**	ug/L	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 17:05

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 19:51

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
4-Nitroaniline	100-01-6	1	0.2	1.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	0.4	2.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	0.03	0.2	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	0.02	0.2	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	0.04	0.2	ND	ug/L	U
Pentachlorophenol	87-86-5	1	0.1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	0.04	0.2	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	0.05	0.2	**2.9**	ug/L	
Butylbenzylphthalate	85-68-7	1	0.07	0.2	**0.6**	ug/L	
3,3'-Dichlorobenzidine	91-94-1	1	0.3	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	0.2	0.2	**6.0**	ug/L	
Di-n-Octylphthalate	117-84-0	1	0.05	0.2	ND	ug/L	U
Surrogate: 2-Fluorophenol				*30-160 %*	*51.5*	*%*	
Surrogate: Phenol-d5				*30-160 %*	*28.4*	*%*	*
Surrogate: 2-Chlorophenol-d4				*30-160 %*	*75.0*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*30-160 %*	*71.8*	*%*	
Surrogate: Nitrobenzene-d5				*30-160 %*	*66.6*	*%*	
Surrogate: 2-Fluorobiphenyl				*30-160 %*	*73.0*	*%*	
Surrogate: 2,4,6-Tribromophenol				*30-160 %*	*41.4*	*%*	Q
Surrogate: p-Terphenyl-d14				*30-160 %*	*76.6*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 17:05
Instrument: NT11 Analyst: VTS — Analyzed: 02/01/2020 15:12

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-07 H 01
Preparation Batch: BIA0542 — Sample Size: 500 mL
Prepared: 27-Jan-2020 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 20A0325-07 H 01
Cleanup Batch: CIA0212 — Initial Volume: 0.5 mL
Cleaned: 30-Jan-2020 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.001	0.010	**0.042**	ug/L	
2-Methylnaphthalene	91-57-6	1	0.001	0.010	**0.419**	ug/L	
1-Methylnaphthalene	90-12-0	1	0.0009	0.010	**4.18**	ug/L	E
2-Chloronaphthalene	91-58-7	1	0.001	0.010	**0.210**	ug/L	
Acenaphthylene	208-96-8	1	0.002	0.010	**0.345**	ug/L	
Acenaphthene	83-32-9	1	0.003	0.010	**0.645**	ug/L	
Dibenzofuran	132-64-9	1	0.002	0.010	**0.223**	ug/L	
Fluorene	86-73-7	1	0.002	0.010	**0.903**	ug/L	
Phenanthrene	85-01-8	1	0.001	0.010	**0.055**	ug/L	
Anthracene	120-12-7	1	0.001	0.010	**0.004**	ug/L	J
Carbazole	86-74-8	1	0.001	0.010	**0.289**	ug/L	
Fluoranthene	206-44-0	1	0.002	0.010	**0.032**	ug/L	
Pyrene	129-00-0	1	0.001	0.010	**0.088**	ug/L	
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.085**	ug/L	
Chrysene	218-01-9	1	0.0009	0.010	**0.101**	ug/L	
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	**0.041**	ug/L	
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	**0.018**	ug/L	
Benzo(j)fluoranthene	205-82-3	1	0.002	0.010	**0.015**	ug/L	
Benzofluoranthenes, Total		1	0.004	0.010	**0.073**	ug/L	
Benzo(a)pyrene	50-32-8	1	0.002	0.010	**0.053**	ug/L	
Perylene	1985-5-0	1	0.006	0.010	**0.015**	ug/L	
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	**0.020**	ug/L	
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	**0.010**	ug/L	J
Benzo(g,h,i)perylene	191-24-2	1	0.001	0.010	**0.036**	ug/L	
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*88.7*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*90.0*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*28.8*	*%*	*

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 14:48

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) — Extract ID: 20A0325-07 G 01
Preparation Batch: BIA0540 — Sample Size: 460 mL
Prepared: 30-Jan-2020 — Final Volume: 1 mL

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 17:05

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 14:48

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.04	0.2	**0.1**	ug/L	J
Surrogate: 1,4-Dioxane-d8				*33.6-120 %*	*58.3*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/24/2020 17:05

Instrument: FID4 Analyst: JGR — Analyzed: 01/31/2020 11:23

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-07 I 01

Preparation Batch: BIA0587 — Sample Size: 500 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	**7.87**	mg/L	E
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	**1.98**	mg/L	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*		*NRS*	NRS

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/24/2020 17:05

Instrument: ECD7 Analyst: JGR — Analyzed: 02/03/2020 15:35

Sample Preparation:	Preparation Method: EPA 3510C SepF		Extract ID: 20A0325-07 E 01
	Preparation Batch: BIA0568	Sample Size: 1000 mL	
	Prepared: 28-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 20A0325-07 E 01
	Cleanup Batch: CIA0203	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:20A0325-07 E 01
	Cleanup Batch: CIA0201	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:20A0325-07 E 01
	Cleanup Batch: CIA0202	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	10	0.025	0.100	ND	ug/L	U
Aroclor 1221	11104-28-2	10	0.025	0.100	ND	ug/L	U
Aroclor 1232	11141-16-5	10	0.025	0.100	ND	ug/L	U
Aroclor 1242	53469-21-9	10	0.025	0.100	ND	ug/L	U
Aroclor 1248	12672-29-6	10	0.025	0.100	**1.13**	ug/L	D
Aroclor 1254	11097-69-1	10	0.025	0.100	**2.78**	ug/L	D
Aroclor 1260	11096-82-5	10	0.028	0.100	**1.09**	ug/L	D
Aroclor 1262	37324-23-5	10	0.028	0.100	ND	ug/L	U
Aroclor 1268	11100-14-4	10	0.028	0.100	ND	ug/L	U
Surrogate: Decachlorobiphenyl				*29-120 %*	*67.6*	*%*	
Surrogate: Tetrachlorometaxylene				*32-120 %*	*46.0*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*29-120 %*	*53.4*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*32-120 %*	*52.7*	*%*	

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Metals and Metallic Compounds

Method: EPA 6020A — Sampled: 01/24/2020 17:05
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 20:56

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-07 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	1	0.130	0.500	**0.357**	ug/L	J
Iron	7439-89-6	1	6.27	20.0	**389**	ug/L	
Lead	7439-92-1	1	0.0680	0.100	**0.237**	ug/L	
Manganese	7439-96-5	1	0.0850	0.500	**197**	ug/L	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Metals and Metallic Compounds

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 17:05
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 20:56

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-07 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0220	0.200	**0.481**	ug/L	
Cadmium	7440-43-9	1	0.0300	0.100	ND	ug/L	U
Copper	7440-50-8	1	0.340	0.500	**0.934**	ug/L	
Nickel	7440-02-0	1	0.0500	0.500	**1.65**	ug/L	
Zinc	7440-66-6	1	0.820	4.00	**27.9**	ug/L	

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07 (Water)

Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/24/2020 17:05

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 16:01

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-07 A

Preparation Batch: BIB0115 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000010	0.000020	**0.000011**	mg/L	J

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 17:05
Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 15:06

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-07RE1 C
Preparation Batch: BIA0527 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	**0.79**	ug/L	M
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**4.29**	ug/L	J
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	**0.47**	ug/L	Q
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	**0.33**	ug/L	
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	**0.38**	ug/L	
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**0.41**	ug/L	
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	**6.25**	ug/L	
Trichloroethene	79-01-6	1	0.05	0.20	**0.34**	ug/L	
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	**0.47**	ug/L	
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 17:05

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 15:06

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	**0.05**	ug/L	J
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	**4.54**	ug/L	
Ethylbenzene	100-41-4	1	0.04	0.20	**1.55**	ug/L	
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	**0.83**	ug/L	
o-Xylene	95-47-6	1	0.03	0.20	**0.25**	ug/L	
Xylenes, total	1330-20-7	1	0.09	0.60	**1.09**	ug/L	
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	**0.21**	ug/L	Y1
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	**47.6**	ug/L	
Bromobenzene	108-86-1	1	0.06	0.20	**0.09**	ug/L	J
Isopropyl Benzene	98-82-8	1	0.02	0.20	**34.6**	ug/L	
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	**1.23**	ug/L	
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	**0.13**	ug/L	J
s-Butylbenzene	135-98-8	1	0.02	0.20	**8.17**	ug/L	
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	**0.17**	ug/L	J
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	**1.66**	ug/L	
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	**9.81**	ug/L	
n-Butylbenzene	104-51-8	1	0.02	0.20	**4.86**	ug/L	
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	**19.1**	ug/L	
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	**0.15**	ug/L	J
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	**0.25**	ug/L	J
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 17:05

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 15:06

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*97.5*	*%*	
Surrogate: Toluene-d8		*80-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*103*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*102*	*%*	

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700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07RE1 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 01/24/2020 17:05

Instrument: NT2 Analyst: LH — Analyzed: 01/28/2020 14:53

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-07RE1 B

Preparation Batch: BIA0570 — Sample Size: 10 mL

Prepared: 28-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	**1580**	ug/L	
Surrogate: Toluene-d8			*80-120 %*	*99.2*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*102*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07RE1 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 17:05
Instrument: NT11 Analyst: VTS — Analyzed: 02/06/2020 15:48

Sample Preparation: Preparation Method: EPA 3510C SepF; Preparation Batch: BIA0542; Prepared: 27-Jan-2020; Sample Size: 500 mL; Final Volume: 0.5 mL — Extract ID: 20A0325-07RE1 H 01

Sample Cleanup: Cleanup Method: Silica Gel; Cleanup Batch: CIA0212; Cleaned: 30-Jan-2020; Initial Volume: 0.5 mL; Final Volume: 0.5 mL — Extract ID: 20A0325-07RE1 H 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	5	0.007	0.050	**0.047**	ug/L	J, D
2-Methylnaphthalene	91-57-6	5	0.005	0.050	**0.537**	ug/L	D
1-Methylnaphthalene	90-12-0	5	0.005	0.050	**6.02**	ug/L	D, E
2-Chloronaphthalene	91-58-7	5	0.005	0.050	ND	ug/L	U
Acenaphthylene	208-96-8	5	0.009	0.050	ND	ug/L	U
Acenaphthene	83-32-9	5	0.014	0.050	**0.889**	ug/L	D
Dibenzofuran	132-64-9	5	0.008	0.050	**0.324**	ug/L	D
Fluorene	86-73-7	5	0.008	0.050	**1.02**	ug/L	D
Phenanthrene	85-01-8	5	0.007	0.050	**0.107**	ug/L	Q, D
Anthracene	120-12-7	5	0.006	0.050	**0.015**	ug/L	J, D
Carbazole	86-74-8	5	0.006	0.050	**0.147**	ug/L	D
Fluoranthene	206-44-0	5	0.009	0.050	**0.016**	ug/L	J, D
Pyrene	129-00-0	5	0.006	0.050	**0.043**	ug/L	J, D
Benzo(a)anthracene	56-55-3	5	0.004	0.050	**0.087**	ug/L	D
Chrysene	218-01-9	5	0.005	0.050	**0.103**	ug/L	D
Benzo(b)fluoranthene	205-99-2	5	0.002	0.050	**0.039**	ug/L	J, D
Benzo(k)fluoranthene	207-08-9	5	0.016	0.050	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	5	0.009	0.050	**0.016**	ug/L	J, D
Benzofluoranthenes, Total		5	0.018	0.050	**0.068**	ug/L	D
Benzo(a)pyrene	50-32-8	5	0.012	0.050	**0.050**	ug/L	J, D
Perylene	1985-5-0	5	0.029	0.050	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	5	0.005	0.050	**0.019**	ug/L	J, D
Dibenzo(a,h)anthracene	53-70-3	5	0.007	0.050	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	5	0.007	0.050	**0.034**	ug/L	J, D
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*115*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*78.5*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*13.5*	*%*	*

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-07RE1 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/24/2020 17:05
Instrument: FID4 Analyst: JGR — Analyzed: 02/04/2020 09:28

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-07RE1 I 01
Preparation Batch: BIA0587 — Sample Size: 500 mL
Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	10	1.00	**8.92**	mg/L	D
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	10	2.00	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*96.0*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A — Sampled: 01/24/2020 17:05
Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:34

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-08 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.130	0.500	**0.421**	ug/L	J
Iron, Dissolved	7439-89-6	1	6.27	20.0	**323**	ug/L	
Lead, Dissolved	7439-92-1	1	0.0680	0.100	ND	ug/L	U

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 20:38

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-08 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Manganese, Dissolved	7439-96-5	1	0.0850	0.500	**199**	ug/L	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 17:05

Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:34

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-08 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**0.405**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.0300	0.100	**0.0360**	ug/L	J
Copper, Dissolved	7440-50-8	1	0.340	0.500	ND	ug/L	U
Zinc, Dissolved	7440-66-6	1	0.820	4.00	**4.77**	ug/L	

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 20:38

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-08 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nickel, Dissolved	7440-02-0	1	0.0500	0.500	**1.60**	ug/L	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-104-012420

20A0325-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A — Sampled: 01/24/2020 17:05

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 16:52

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-08 A

Preparation Batch: BIB0116 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000010	0.000020	**0.000010**	mg/L	J

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 09:25
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 13:15

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-09 B
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**5.41**	ug/L	
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	**0.06**	ug/L	J
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**0.08**	ug/L	J
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.05	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 09:25

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 13:15

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	**0.02**	ug/L	J
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	**0.12**	ug/L	J
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	**0.05**	ug/L	J
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.02	0.20	**0.02**	ug/L	J
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	**0.15**	ug/L	J
n-Butylbenzene	104-51-8	1	0.02	0.20	**0.04**	ug/L	J
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	**0.11**	ug/L	J
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 09:25

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 13:15

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*70.5*	*%*	*
Surrogate: Toluene-d8		*80-120 %*	*95.0*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*116*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*105*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 01/24/2020 09:25
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 13:15

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-09 B
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*95.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*116*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 09:25

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 20:27

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-09 F 01

Preparation Batch: BIA0595 — Sample Size: 1000 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	0.01	0.2	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	0.03	0.2	ND	ug/L	U
2-Chlorophenol	95-57-8	1	0.03	0.2	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.03	0.2	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.03	0.2	**0.07**	ug/L	J
1,2-Dichlorobenzene	95-50-1	1	0.03	0.2	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	0.02	0.2	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	0.03	0.2	ND	ug/L	U
2-Methylphenol	95-48-7	1	0.03	0.2	ND	ug/L	U
Hexachloroethane	67-72-1	1	0.04	0.2	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	0.04	0.2	ND	ug/L	U
4-Methylphenol	106-44-5	1	0.03	0.2	ND	ug/L	U
Nitrobenzene	98-95-3	1	0.03	0.2	ND	ug/L	U
Isophorone	78-59-1	1	0.03	0.2	ND	ug/L	U
2-Nitrophenol	88-75-5	1	0.04	1.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	0.3	1.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	0.03	0.2	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	0.1	1.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.03	0.2	ND	ug/L	U
Benzoic acid	65-85-0	1	0.1	2.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	0.04	1.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	0.04	0.2	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	0.1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	0.1	1.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	0.2	1.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	0.1	1.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	0.03	0.2	ND	ug/L	U
2-Nitroaniline	88-74-4	1	0.2	1.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	0.04	0.2	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	0.2	1.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	0.2	1.0	ND	ug/L	U
2,4-Dinitrophenol	51-28-5	1	0.2	2.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	0.06	1.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	0.1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	0.02	0.2	ND	ug/L	U
Diethyl phthalate	84-66-2	1	0.06	0.2	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 09:25

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 20:27

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
4-Nitroaniline	100-01-6	1	0.2	1.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	0.4	2.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	0.03	0.2	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	0.02	0.2	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	0.04	0.2	ND	ug/L	U
Pentachlorophenol	87-86-5	1	0.1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	0.04	0.2	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	0.05	0.2	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	0.07	0.2	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	0.3	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	0.2	0.2	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	0.05	0.2	ND	ug/L	U
Surrogate: 2-Fluorophenol				*30-160 %*	*53.1*	*%*	
Surrogate: Phenol-d5				*30-160 %*	*29.4*	*%*	*
Surrogate: 2-Chlorophenol-d4				*30-160 %*	*81.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*30-160 %*	*71.6*	*%*	
Surrogate: Nitrobenzene-d5				*30-160 %*	*74.2*	*%*	
Surrogate: 2-Fluorobiphenyl				*30-160 %*	*79.8*	*%*	
Surrogate: 2,4,6-Tribromophenol				*30-160 %*	*103*	*%*	Q
Surrogate: p-Terphenyl-d14				*30-160 %*	*85.2*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 09:25
Instrument: NT11 Analyst: VTS — Analyzed: 02/01/2020 15:41

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-09 H 01
Preparation Batch: BIA0542 — Sample Size: 500 mL
Prepared: 27-Jan-2020 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 20A0325-09 H 01
Cleanup Batch: CIA0212 — Initial Volume: 0.5 mL
Cleaned: 30-Jan-2020 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.001	0.010	**0.003**	ug/L	J
2-Methylnaphthalene	91-57-6	1	0.001	0.010	**0.002**	ug/L	J
1-Methylnaphthalene	90-12-0	1	0.0009	0.010	**0.003**	ug/L	J
2-Chloronaphthalene	91-58-7	1	0.001	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.002	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.003	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.002	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.002	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.001	0.010	**0.002**	ug/L	J
Anthracene	120-12-7	1	0.001	0.010	ND	ug/L	U
Carbazole	86-74-8	1	0.001	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.002	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.001	0.010	**0.002**	ug/L	J
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.001**	ug/L	J
Chrysene	218-01-9	1	0.0009	0.010	**0.002**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	**0.0009**	ug/L	J
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.002	0.010	ND	ug/L	U
Benzofluoranthenes, Total		1	0.004	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Perylene	1985-5-0	1	0.006	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*84.2*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*92.2*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*97.0*	*%*	

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 15:13

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) — Extract ID: 20A0325-09 G 01
Preparation Batch: BIA0540 — Sample Size: 460 mL
Prepared: 30-Jan-2020 — Final Volume: 1 mL

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 09:25

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 15:13

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.04	0.2	**0.08**	ug/L	J
Surrogate: 1,4-Dioxane-d8				*33.6-120 %*	*65.0*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/24/2020 09:25
Instrument: FID4 Analyst: JGR — Analyzed: 01/31/2020 11:42

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-09 I 01
Preparation Batch: BIA0587 — Sample Size: 500 mL
Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	**0.124**	mg/L	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*92.5*	*%*	

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/24/2020 09:25

Instrument: ECD7 Analyst: JGR — Analyzed: 01/30/2020 15:39

Sample Preparation:	Preparation Method: EPA 3510C SepF		Extract ID: 20A0325-09 E 01
	Preparation Batch: BIA0568	Sample Size: 1000 mL	
	Prepared: 28-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 20A0325-09 E 01
	Cleanup Batch: CIA0203	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:20A0325-09 E 01
	Cleanup Batch: CIA0201	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:20A0325-09 E 01
	Cleanup Batch: CIA0202	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.002	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.002	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.002	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.002	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1262	37324-23-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1268	11100-14-4	1	0.003	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl				*29-120 %*	*57.2*	*%*	
Surrogate: Tetrachlorometaxylene				*32-120 %*	*55.5*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*29-120 %*	*44.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*32-120 %*	*51.6*	*%*	

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Metals and Metallic Compounds

Method: EPA 6020A — Sampled: 01/24/2020 09:25
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 21:01

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-09 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	1	0.130	0.500	**0.143**	ug/L	J
Iron	7439-89-6	1	6.27	20.0	**14400**	ug/L	
Lead	7439-92-1	1	0.0680	0.100	**0.124**	ug/L	
Manganese	7439-96-5	10	0.850	5.00	**1150**	ug/L	D

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700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Metals and Metallic Compounds

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 09:25
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 21:01

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-09 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0220	0.200	**2.26**	ug/L	
Cadmium	7440-43-9	1	0.0300	0.100	ND	ug/L	U
Copper	7440-50-8	1	0.340	0.500	ND	ug/L	U
Nickel	7440-02-0	1	0.0500	0.500	**1.92**	ug/L	
Zinc	7440-66-6	1	0.820	4.00	**2.01**	ug/L	J

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09 (Water)

Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/24/2020 09:25

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 16:04

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-09 A

Preparation Batch: BIB0115 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000010	0.000020	**0.000011**	mg/L	J

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 09:25
Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 15:34

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-09RE1 C
Preparation Batch: BIA0527 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**2.20**	ug/L	J
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	**0.12**	ug/L	J
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**0.09**	ug/L	J
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.05	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 09:25

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 15:34

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	**0.03**	ug/L	J
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	**0.09**	ug/L	J
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.02	0.20	**0.05**	ug/L	J
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	**0.04**	ug/L	J
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	**0.19**	ug/L	J
n-Butylbenzene	104-51-8	1	0.02	0.20	**0.06**	ug/L	J
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	**0.18**	ug/L	J
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-09RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 09:25

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 15:34

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*98.0*	*%*	
Surrogate: Toluene-d8		*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*100*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*101*	*%*	

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-10 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A — Sampled: 01/24/2020 09:25

Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:38

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-10 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.130	0.500	**0.192**	ug/L	J
Lead, Dissolved	7439-92-1	1	0.0680	0.100	ND	ug/L	U

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 23:09

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-10 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Manganese, Dissolved	7439-96-5	10	0.850	5.00	**1110**	ug/L	D

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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-10 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 09:25
Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:38

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-10 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**2.38**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.0300	0.100	ND	ug/L	U
Copper, Dissolved	7440-50-8	1	0.340	0.500	ND	ug/L	U
Zinc, Dissolved	7440-66-6	1	0.820	4.00	**2.54**	ug/L	J

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 20:45

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-10 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nickel, Dissolved	7440-02-0	1	0.0500	0.500	**1.89**	ug/L	

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-10 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A — Sampled: 01/24/2020 09:25

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 16:55

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-10 A

Preparation Batch: BIB0116 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000010	0.000020	**0.000012**	mg/L	J

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-105-012420

20A0325-10RE1 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A — Sampled: 01/24/2020 09:25

Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/30/2020 17:29

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-10RE1 A 01

Preparation Batch: BIA0571 — Sample Size: 25 mL

Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Iron, Dissolved	7439-89-6	5	31.4	100	**17100**	ug/L	D

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 12:25
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 13:35

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-11 B
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**0.18**	ug/L	J
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	**0.29**	ug/L	
Trichloroethene	79-01-6	1	0.05	0.20	**2.01**	ug/L	
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 12:25

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 13:35

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	**0.13**	ug/L	J
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	**0.42**	ug/L	
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	**0.04**	ug/L	J
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.02	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.02	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 12:25

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 13:35

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*72.1*	*%*	*
Surrogate: Toluene-d8		*80-120 %*	*92.0*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*109*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*104*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 01/24/2020 12:25

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 13:35

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-11 B

Preparation Batch: BIA0521 — Sample Size: 10 mL

Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*92.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*109*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 12:25

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 21:03

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-11 F 01

Preparation Batch: BIA0595 — Sample Size: 1000 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	0.01	0.2	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	0.03	0.2	ND	ug/L	U
2-Chlorophenol	95-57-8	1	0.03	0.2	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.03	0.2	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.03	0.2	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.03	0.2	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	0.02	0.2	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	0.03	0.2	ND	ug/L	U
2-Methylphenol	95-48-7	1	0.03	0.2	ND	ug/L	U
Hexachloroethane	67-72-1	1	0.04	0.2	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	0.04	0.2	ND	ug/L	U
4-Methylphenol	106-44-5	1	0.03	0.2	ND	ug/L	U
Nitrobenzene	98-95-3	1	0.03	0.2	ND	ug/L	U
Isophorone	78-59-1	1	0.03	0.2	ND	ug/L	U
2-Nitrophenol	88-75-5	1	0.04	1.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	0.3	1.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	0.03	0.2	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	0.1	1.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.03	0.2	ND	ug/L	U
Benzoic acid	65-85-0	1	0.1	2.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	0.04	1.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	0.04	0.2	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	0.1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	0.1	1.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	0.2	1.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	0.1	1.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	0.03	0.2	ND	ug/L	U
2-Nitroaniline	88-74-4	1	0.2	1.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	0.04	0.2	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	0.2	1.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	0.2	1.0	ND	ug/L	U
2,4-Dinitrophenol	51-28-5	1	0.2	2.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	0.06	1.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	0.1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	0.02	0.2	ND	ug/L	U
Diethyl phthalate	84-66-2	1	0.06	0.2	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D — Sampled: 01/24/2020 12:25

Instrument: NT10 Analyst: VTS — Analyzed: 02/03/2020 21:03

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
4-Nitroaniline	100-01-6	1	0.2	1.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	0.4	2.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	0.03	0.2	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	0.02	0.2	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	0.04	0.2	ND	ug/L	U
Pentachlorophenol	87-86-5	1	0.1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	0.04	0.2	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	0.05	0.2	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	0.07	0.2	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	0.3	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	0.2	0.2	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	0.05	0.2	ND	ug/L	U
Surrogate: 2-Fluorophenol				*30-160 %*	*50.1*	*%*	
Surrogate: Phenol-d5				*30-160 %*	*27.4*	*%*	*
Surrogate: 2-Chlorophenol-d4				*30-160 %*	*75.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*30-160 %*	*72.3*	*%*	
Surrogate: Nitrobenzene-d5				*30-160 %*	*70.3*	*%*	
Surrogate: 2-Fluorobiphenyl				*30-160 %*	*78.5*	*%*	
Surrogate: 2,4,6-Tribromophenol				*30-160 %*	*99.5*	*%*	Q
Surrogate: p-Terphenyl-d14				*30-160 %*	*82.5*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 12:25

Instrument: NT11 Analyst: VTS — Analyzed: 02/01/2020 16:11

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-11 H 01
Preparation Batch: BIA0542 — Sample Size: 500 mL
Prepared: 27-Jan-2020 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 20A0325-11 H 01
Cleanup Batch: CIA0212 — Initial Volume: 0.5 mL
Cleaned: 30-Jan-2020 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.001	0.010	**0.003**	ug/L	J
2-Methylnaphthalene	91-57-6	1	0.001	0.010	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.0009	0.010	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	0.001	0.010	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.002	0.010	ND	ug/L	U
Acenaphthene	83-32-9	1	0.003	0.010	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.002	0.010	ND	ug/L	U
Fluorene	86-73-7	1	0.002	0.010	ND	ug/L	U
Phenanthrene	85-01-8	1	0.001	0.010	ND	ug/L	U
Anthracene	120-12-7	1	0.001	0.010	ND	ug/L	U
Carbazole	86-74-8	1	0.001	0.010	ND	ug/L	U
Fluoranthene	206-44-0	1	0.002	0.010	ND	ug/L	U
Pyrene	129-00-0	1	0.001	0.010	**0.002**	ug/L	J
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.0009	0.010	**0.002**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.002	0.010	ND	ug/L	U
Benzofluoranthenes, Total		1	0.004	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Perylene	1985-5-0	1	0.006	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*81.2*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*91.4*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*96.5*	*%*	

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 15:39

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) — Extract ID: 20A0325-11 G 01
Preparation Batch: BIA0540 — Sample Size: 465 mL
Prepared: 30-Jan-2020 — Final Volume: 1 mL

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 01/24/2020 12:25

Instrument: NT12 Analyst: JZ — Analyzed: 01/31/2020 15:39

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.04	0.2	ND	ug/L	U
Surrogate: 1,4-Dioxane-d8				*33.6-120 %*	*59.1*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 01/24/2020 12:25

Instrument: FID4 Analyst: JGR — Analyzed: 01/31/2020 12:02

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 20A0325-11 I 01

Preparation Batch: BIA0587 — Sample Size: 500 mL

Prepared: 30-Jan-2020 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*92.5*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Aroclor PCB

Method: EPA 8082A — Sampled: 01/24/2020 12:25

Instrument: ECD7 Analyst: JGR — Analyzed: 01/30/2020 16:00

Sample Preparation:	Preparation Method: EPA 3510C SepF		Extract ID: 20A0325-11 E 01
	Preparation Batch: BIA0568	Sample Size: 1000 mL	
	Prepared: 28-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 20A0325-11 E 01
	Cleanup Batch: CIA0203	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:20A0325-11 E 01
	Cleanup Batch: CIA0201	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:20A0325-11 E 01
	Cleanup Batch: CIA0202	Initial Volume: 0.5 mL	
	Cleaned: 29-Jan-2020	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.002	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.002	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.002	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.002	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.002	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1262	37324-23-5	1	0.003	0.010	ND	ug/L	U
Aroclor 1268	11100-14-4	1	0.003	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl				*29-120 %*	*57.3*	*%*	
Surrogate: Tetrachlorometaxylene				*32-120 %*	*46.9*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*29-120 %*	*54.2*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*32-120 %*	*45.6*	*%*	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
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MW-106-012420

20A0325-11 (Water)

Metals and Metallic Compounds

Method: EPA 6020A — Sampled: 01/24/2020 12:25

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 21:06

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-11 A 01

Preparation Batch: BIA0672 — Sample Size: 25 mL

Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	1	0.130	0.500	**0.299**	ug/L	J
Iron	7439-89-6	1	6.27	20.0	**676**	ug/L	
Lead	7439-92-1	1	0.0680	0.100	**0.302**	ug/L	
Manganese	7439-96-5	1	0.0850	0.500	**197**	ug/L	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Metals and Metallic Compounds

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 12:25
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/31/2020 21:06

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-11 A 01
Preparation Batch: BIA0672 — Sample Size: 25 mL
Prepared: 31-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0220	0.200	**1.19**	ug/L	
Cadmium	7440-43-9	1	0.0300	0.100	**0.228**	ug/L	
Copper	7440-50-8	1	0.340	0.500	**2.37**	ug/L	
Nickel	7440-02-0	1	0.0500	0.500	**4.59**	ug/L	
Zinc	7440-66-6	2	1.88	8.00	**286**	ug/L	D

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11 (Water)

Metals and Metallic Compounds

Method: EPA 7470A — Sampled: 01/24/2020 12:25

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 16:13

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-11 A

Preparation Batch: BIB0115 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.000010	0.000020	**0.000011**	mg/L	J

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 12:25

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 16:02

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-11RE1 C

Preparation Batch: BIA0527 — Sample Size: 10 mL

Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**4.22**	ug/L	J
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	**0.26**	ug/L	
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	**0.38**	ug/L	
Trichloroethene	79-01-6	1	0.05	0.20	**2.16**	ug/L	
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 12:25

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 16:02

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	**0.14**	ug/L	J
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	**0.44**	ug/L	
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	**0.03**	ug/L	J
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.02	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	**0.04**	ug/L	J
n-Butylbenzene	104-51-8	1	0.02	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	**0.04**	ug/L	J
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-11RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 12:25

Instrument: NT3 Analyst: PKC — Analyzed: 01/27/2020 16:02

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*100*	*%*	
Surrogate: Toluene-d8		*80-120 %*	*101*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*101*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*98.8*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-12 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A — Sampled: 01/24/2020 12:25
Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:43

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-12 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.130	0.500	**0.313**	ug/L	J
Iron, Dissolved	7439-89-6	1	6.27	20.0	**680**	ug/L	
Lead, Dissolved	7439-92-1	1	0.0680	0.100	ND	ug/L	U

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 20:30

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-12 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Manganese, Dissolved	7439-96-5	2	0.170	1.00	**209**	ug/L	D

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

MW-106-012420

20A0325-12 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020A UCT-KED — Sampled: 01/24/2020 12:25
Instrument: ICPMS1 Analyst: MCB — Analyzed: 01/29/2020 22:43

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-12 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**1.14**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.0300	0.100	**0.194**	ug/L	
Copper, Dissolved	7440-50-8	1	0.340	0.500	**1.34**	ug/L	

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/30/2020 20:30

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20A0325-12 A 01
Preparation Batch: BIA0571 — Sample Size: 25 mL
Prepared: 28-Jan-2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nickel, Dissolved	7440-02-0	2	0.100	1.00	**4.57**	ug/L	D
Zinc, Dissolved	7440-66-6	2	1.88	8.00	**288**	ug/L	D

Seattle Public Utilities	Project: South Park Landfill	
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MW-106-012420

20A0325-12 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A — Sampled: 01/24/2020 12:25

Instrument: HYDRA Analyst: JPK — Analyzed: 02/07/2020 16:59

Sample Preparation: Preparation Method: TLM EPA 7470A low level — Extract ID: 20A0325-12 A

Preparation Batch: BIB0116 — Sample Size: 20 mL

Prepared: 06-Feb-2020 — Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000010	0.000020	ND	mg/L	U

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Trip Blank

20A0325-13 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 09:25
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 11:13

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-13 C
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.09	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.06	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.25	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.09	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.04	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.48	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.04	0.20	ND	ug/L	U
Acetone	67-64-1	1	2.06	5.00	**7.55**	ug/L	
1,1-Dichloroethene	75-35-4	1	0.05	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.04	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.23	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.49	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.60	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.04	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.05	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.07	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.05	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	0.81	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.05	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.04	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.03	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.06	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.04	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.03	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.04	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.07	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.03	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.05	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.04	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.05	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.15	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.25	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	0.97	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.06	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.08	0.20	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Trip Blank

20A0325-13 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 09:25

Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 11:13

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	0.90	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.13	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.06	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.05	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.05	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.07	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.02	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.09	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.05	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.06	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.06	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.13	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.32	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.02	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.06	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.02	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.02	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.02	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.03	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.02	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.02	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.02	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.03	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.04	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.04	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.02	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.04	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.37	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.11	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.07	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.12	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.11	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.05	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.07	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	5.00	ND	ug/L	U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Trip Blank

20A0325-13 (Water)

Volatile Organic Compounds

Method: EPA 8260C — Sampled: 01/24/2020 09:25
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 11:13

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichloroethane-d4		*80-129 %*	*98.3*	*%*	
Surrogate: Toluene-d8		*80-120 %*	*98.3*	*%*	
Surrogate: 4-Bromofluorobenzene		*80-120 %*	*94.7*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*80-120 %*	*105*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Trip Blank

20A0325-13 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 01/24/2020 09:25
Instrument: NT2 Analyst: PKC — Analyzed: 01/27/2020 11:13

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap) — Extract ID: 20A0325-13 C
Preparation Batch: BIA0521 — Sample Size: 10 mL
Prepared: 27-Jan-2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*98.3*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*94.7*	*%*	

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0521 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0521-BLK1)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 10:33							
Gasoline Range Organics (Tol-Nap)	ND		100	ug/L							U
Surrogate: Toluene-d8	4.70			ug/L	*5.00*		*93.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.24			ug/L	*5.00*		*105*	*80-120*			
Blank (BIA0521-BLK2)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 10:33							
Chloromethane	ND	0.09	0.50	ug/L							U
Vinyl Chloride	ND	0.06	0.20	ug/L							U
Bromomethane	ND	0.25	1.00	ug/L							U
Chloroethane	ND	0.09	0.20	ug/L							U
Trichlorofluoromethane	ND	0.04	0.20	ug/L							U
Acrolein	ND	2.48	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.04	0.20	ug/L							U
Acetone	ND	2.06	5.00	ug/L							U
1,1-Dichloroethene	ND	0.05	0.20	ug/L							U
Bromoethane	ND	0.04	0.20	ug/L							U
Iodomethane	ND	0.23	1.00	ug/L							U
Methylene Chloride	ND	0.49	1.00	ug/L							U
Acrylonitrile	ND	0.60	1.00	ug/L							U
Carbon Disulfide	ND	0.04	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.05	0.20	ug/L							U
Vinyl Acetate	ND	0.07	0.20	ug/L							U
1,1-Dichloroethane	ND	0.05	0.20	ug/L							U
2-Butanone	ND	0.81	5.00	ug/L							U
2,2-Dichloropropane	ND	0.05	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.04	0.20	ug/L							U
Chloroform	ND	0.03	0.20	ug/L							U
Bromochloromethane	ND	0.06	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.04	0.20	ug/L							U
1,1-Dichloropropene	ND	0.03	0.20	ug/L							U
Carbon tetrachloride	ND	0.04	0.20	ug/L							U
1,2-Dichloroethane	ND	0.07	0.20	ug/L							U
Benzene	ND	0.03	0.20	ug/L							U
Trichloroethene	ND	0.05	0.20	ug/L							U
1,2-Dichloropropane	ND	0.04	0.20	ug/L							U
Bromodichloromethane	ND	0.05	0.20	ug/L							U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0521 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0521-BLK2)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 10:33							
Dibromomethane	ND	0.15	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	0.25	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	0.97	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.06	0.20	ug/L							U
Toluene	ND	0.04	0.20	ug/L							U
trans-1,3-Dichloropropene	ND	0.08	0.20	ug/L							U
2-Hexanone	ND	0.90	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.13	0.20	ug/L							U
1,3-Dichloropropane	ND	0.06	0.20	ug/L							U
Tetrachloroethene	ND	0.05	0.20	ug/L							U
Dibromochloromethane	ND	0.05	0.20	ug/L							U
1,2-Dibromoethane	ND	0.07	0.20	ug/L							U
Chlorobenzene	ND	0.02	0.20	ug/L							U
Ethylbenzene	ND	0.04	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.04	0.20	ug/L							U
m,p-Xylene	ND	0.05	0.40	ug/L							U
o-Xylene	ND	0.03	0.20	ug/L							U
Xylenes, total	ND	0.09	0.60	ug/L							U
Styrene	ND	0.05	0.20	ug/L							U
Bromoform	ND	0.06	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.06	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.13	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	0.32	1.00	ug/L							U
n-Propylbenzene	ND	0.02	0.20	ug/L							U
Bromobenzene	ND	0.06	0.20	ug/L							U
Isopropyl Benzene	ND	0.02	0.20	ug/L							U
2-Chlorotoluene	ND	0.02	0.20	ug/L							U
4-Chlorotoluene	ND	0.02	0.20	ug/L							U
t-Butylbenzene	ND	0.03	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.02	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.02	0.20	ug/L							U
s-Butylbenzene	ND	0.02	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.03	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.04	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.04	0.20	ug/L							U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0521 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0521-BLK2)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 10:33							
n-Butylbenzene	ND	0.02	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.04	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.37	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.11	0.50	ug/L							U
Hexachloro-1,3-Butadiene	0.13	0.07	0.50	ug/L							J
Naphthalene	ND	0.12	0.50	ug/L							U
1,2,3-Trichlorobenzene	ND	0.11	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.05	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.07	0.50	ug/L							U
2-Pentanone	ND	5.00	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	3.99			ug/L	*5.00*		*79.7*	*80-129*			*
Surrogate: Toluene-d8	4.70			ug/L	*5.00*		*93.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.24			ug/L	*5.00*		*105*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.24			ug/L	*5.00*		*105*	*80-120*			
LCS (BIA0521-BS1)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 08:29							
Gasoline Range Organics (Tol-Nap)	1090		100	ug/L	1000		109	72-128			
Surrogate: Toluene-d8	4.88			ug/L	*5.00*		*97.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.78			ug/L	*5.00*		*116*	*80-120*			
LCS (BIA0521-BS2)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 09:09							
Chloromethane	6.09	0.09	0.50	ug/L	10.0		60.9	60-138			Q
Vinyl Chloride	8.66	0.06	0.20	ug/L	10.0		86.6	66-133			
Bromomethane	8.16	0.25	1.00	ug/L	10.0		81.6	72-131			
Chloroethane	9.12	0.09	0.20	ug/L	10.0		91.2	60-155			
Trichlorofluoromethane	9.40	0.04	0.20	ug/L	10.0		94.0	80-129			
Acrolein	41.1	2.48	5.00	ug/L	50.0		82.3	52-144			
1,1,2-Trichloro-1,2,2-Trifluoroethane	8.73	0.04	0.20	ug/L	10.0		87.3	76-129			
Acetone	41.0	2.06	5.00	ug/L	50.0		82.0	58-142			
1,1-Dichloroethene	8.45	0.05	0.20	ug/L	10.0		84.5	69-135			
Bromoethane	9.27	0.04	0.20	ug/L	10.0		92.7	78-128			
Iodomethane	8.66	0.23	1.00	ug/L	10.0		86.6	56-147			
Methylene Chloride	8.46	0.49	1.00	ug/L	10.0		84.6	65-135			
Acrylonitrile	8.34	0.60	1.00	ug/L	10.0		83.4	64-134			
Carbon Disulfide	8.73	0.04	0.20	ug/L	10.0		87.3	78-125			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0521 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BIA0521-BS2)					Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 09:09						
trans-1,2-Dichloroethene	8.49	0.05	0.20	ug/L	10.0		84.9	78-128			
Vinyl Acetate	7.59	0.07	0.20	ug/L	10.0		75.9	55-138			Q
1,1-Dichloroethane	8.70	0.05	0.20	ug/L	10.0		87.0	76-124			
2-Butanone	42.2	0.81	5.00	ug/L	50.0		84.4	61-140			
2,2-Dichloropropane	9.10	0.05	0.20	ug/L	10.0		91.0	78-125			
cis-1,2-Dichloroethene	9.06	0.04	0.20	ug/L	10.0		90.6	80-121			
Chloroform	8.81	0.03	0.20	ug/L	10.0		88.1	80-122			
Bromochloromethane	8.88	0.06	0.20	ug/L	10.0		88.8	80-121			
1,1,1-Trichloroethane	9.03	0.04	0.20	ug/L	10.0		90.3	79-123			
1,1-Dichloropropene	9.46	0.03	0.20	ug/L	10.0		94.6	80-120			
Carbon tetrachloride	9.80	0.04	0.20	ug/L	10.0		98.0	53-137			
1,2-Dichloroethane	8.63	0.07	0.20	ug/L	10.0		86.3	75-123			
Benzene	9.40	0.03	0.20	ug/L	10.0		94.0	80-120			
Trichloroethene	9.74	0.05	0.20	ug/L	10.0		97.4	80-120			
1,2-Dichloropropane	9.22	0.04	0.20	ug/L	10.0		92.2	80-120			
Bromodichloromethane	9.84	0.05	0.20	ug/L	10.0		98.4	80-121			
Dibromomethane	9.54	0.15	0.20	ug/L	10.0		95.4	80-120			
2-Chloroethyl vinyl ether	8.14	0.25	1.00	ug/L	10.0		81.4	74-127			
4-Methyl-2-Pentanone	45.7	0.97	5.00	ug/L	50.0		91.3	67-133			
cis-1,3-Dichloropropene	8.63	0.06	0.20	ug/L	10.0		86.3	80-124			
Toluene	9.55	0.04	0.20	ug/L	10.0		95.5	80-120			
trans-1,3-Dichloropropene	7.85	0.08	0.20	ug/L	10.0		78.5	71-127			Q
2-Hexanone	45.4	0.90	5.00	ug/L	50.0		90.8	69-133			
1,1,2-Trichloroethane	9.52	0.13	0.20	ug/L	10.0		95.2	80-121			
1,3-Dichloropropane	9.43	0.06	0.20	ug/L	10.0		94.3	80-120			
Tetrachloroethene	9.86	0.05	0.20	ug/L	10.0		98.6	80-120			
Dibromochloromethane	9.13	0.05	0.20	ug/L	10.0		91.3	65-135			
1,2-Dibromoethane	9.96	0.07	0.20	ug/L	10.0		99.6	80-121			
Chlorobenzene	9.67	0.02	0.20	ug/L	10.0		96.7	80-120			
Ethylbenzene	9.57	0.04	0.20	ug/L	10.0		95.7	80-120			
1,1,1,2-Tetrachloroethane	10.4	0.04	0.20	ug/L	10.0		104	80-120			
m,p-Xylene	20.5	0.05	0.40	ug/L	20.0		102	80-121			
o-Xylene	10.4	0.03	0.20	ug/L	10.0		104	80-121			
Xylenes, total	30.9	0.09	0.60	ug/L	30.0		103	76-127			
Styrene	10.7	0.05	0.20	ug/L	10.0		107	80-124			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0521 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BIA0521-BS2)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 09:09							
Bromoform	8.38	0.06	0.20	ug/L	10.0		83.8	51-134			
1,1,2,2-Tetrachloroethane	9.07	0.06	0.20	ug/L	10.0		90.7	77-123			
1,2,3-Trichloropropane	9.03	0.13	0.50	ug/L	10.0		90.3	76-125			
trans-1,4-Dichloro 2-Butene	8.79	0.32	1.00	ug/L	10.0		87.9	55-129			
n-Propylbenzene	9.93	0.02	0.20	ug/L	10.0		99.3	78-130			
Bromobenzene	9.60	0.06	0.20	ug/L	10.0		96.0	80-120			
Isopropyl Benzene	10.4	0.02	0.20	ug/L	10.0		104	80-128			
2-Chlorotoluene	10.6	0.02	0.20	ug/L	10.0		106	78-122			
4-Chlorotoluene	9.90	0.02	0.20	ug/L	10.0		99.0	80-121			
t-Butylbenzene	10.6	0.03	0.20	ug/L	10.0		106	78-125			
1,3,5-Trimethylbenzene	10.3	0.02	0.20	ug/L	10.0		103	80-129			
1,2,4-Trimethylbenzene	10.6	0.02	0.20	ug/L	10.0		106	80-127			
s-Butylbenzene	10.5	0.02	0.20	ug/L	10.0		105	78-129			
4-Isopropyl Toluene	11.1	0.03	0.20	ug/L	10.0		111	79-130			
1,3-Dichlorobenzene	9.78	0.04	0.20	ug/L	10.0		97.8	80-120			
1,4-Dichlorobenzene	9.65	0.04	0.20	ug/L	10.0		96.5	80-120			
n-Butylbenzene	10.8	0.02	0.20	ug/L	10.0		108	74-129			
1,2-Dichlorobenzene	9.79	0.04	0.20	ug/L	10.0		97.9	80-120			
1,2-Dibromo-3-chloropropane	8.35	0.37	0.50	ug/L	10.0		83.5	62-123			
1,2,4-Trichlorobenzene	11.2	0.11	0.50	ug/L	10.0		112	64-124			
Hexachloro-1,3-Butadiene	10.1	0.07	0.50	ug/L	10.0		101	58-123			
Naphthalene	10.0	0.12	0.50	ug/L	10.0		100	50-134			
1,2,3-Trichlorobenzene	11.1	0.11	0.50	ug/L	10.0		111	49-133			
Dichlorodifluoromethane	8.72	0.05	0.20	ug/L	10.0		87.2	48-147			
Methyl tert-butyl Ether	8.78	0.07	0.50	ug/L	10.0		87.8	71-132			
2-Pentanone	42.3	5.00	5.00	ug/L	50.0		84.7	69-134			
Surrogate: 1,2-Dichloroethane-d4	4.49			ug/L	*5.00*		*89.8*	*80-129*			
Surrogate: Toluene-d8	5.00			ug/L	*5.00*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.33			ug/L	*5.00*		*107*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.13			ug/L	*5.00*		*103*	*80-120*			
LCS Dup (BIA0521-BSD1)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 08:49							
Gasoline Range Organics (Tol-Nap)	1020		100	ug/L	1000		102	72-128	6.57	30	
Surrogate: Toluene-d8	5.10			ug/L	*5.00*		*102*	*80-120*			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0521 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BIA0521-BSD1)					Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 08:49						
Surrogate: 4-Bromofluorobenzene	5.45			ug/L	*5.00*		*109*	*80-120*			
LCS Dup (BIA0521-BSD2)					Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 09:30						
Chloromethane	6.25	0.09	0.50	ug/L	10.0		62.5	60-138	2.57	30	Q
Vinyl Chloride	8.51	0.06	0.20	ug/L	10.0		85.1	66-133	1.70	30	
Bromomethane	8.71	0.25	1.00	ug/L	10.0		87.1	72-131	6.45	30	
Chloroethane	9.23	0.09	0.20	ug/L	10.0		92.3	60-155	1.24	30	
Trichlorofluoromethane	9.26	0.04	0.20	ug/L	10.0		92.6	80-129	1.52	30	
Acrolein	42.3	2.48	5.00	ug/L	50.0		84.6	52-144	2.74	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	8.48	0.04	0.20	ug/L	10.0		84.8	76-129	2.90	30	
Acetone	42.1	2.06	5.00	ug/L	50.0		84.2	58-142	2.62	30	
1,1-Dichloroethene	8.41	0.05	0.20	ug/L	10.0		84.1	69-135	0.45	30	
Bromoethane	9.25	0.04	0.20	ug/L	10.0		92.5	78-128	0.21	30	
Iodomethane	8.58	0.23	1.00	ug/L	10.0		85.8	56-147	0.97	30	
Methylene Chloride	8.59	0.49	1.00	ug/L	10.0		85.9	65-135	1.49	30	
Acrylonitrile	8.51	0.60	1.00	ug/L	10.0		85.1	64-134	1.95	30	
Carbon Disulfide	8.78	0.04	0.20	ug/L	10.0		87.8	78-125	0.56	30	
trans-1,2-Dichloroethene	8.54	0.05	0.20	ug/L	10.0		85.4	78-128	0.55	30	
Vinyl Acetate	7.86	0.07	0.20	ug/L	10.0		78.6	55-138	3.42	30	Q
1,1-Dichloroethane	8.74	0.05	0.20	ug/L	10.0		87.4	76-124	0.41	30	
2-Butanone	43.2	0.81	5.00	ug/L	50.0		86.4	61-140	2.40	30	
2,2-Dichloropropane	9.09	0.05	0.20	ug/L	10.0		90.9	78-125	0.13	30	
cis-1,2-Dichloroethene	9.18	0.04	0.20	ug/L	10.0		91.8	80-121	1.37	30	
Chloroform	8.80	0.03	0.20	ug/L	10.0		88.0	80-122	0.12	30	
Bromochloromethane	8.96	0.06	0.20	ug/L	10.0		89.6	80-121	0.85	30	
1,1,1-Trichloroethane	9.21	0.04	0.20	ug/L	10.0		92.1	79-123	1.98	30	
1,1-Dichloropropene	9.52	0.03	0.20	ug/L	10.0		95.2	80-120	0.55	30	
Carbon tetrachloride	9.91	0.04	0.20	ug/L	10.0		99.1	53-137	1.06	30	
1,2-Dichloroethane	8.67	0.07	0.20	ug/L	10.0		86.7	75-123	0.50	30	
Benzene	9.41	0.03	0.20	ug/L	10.0		94.1	80-120	0.19	30	
Trichloroethene	9.77	0.05	0.20	ug/L	10.0		97.7	80-120	0.30	30	
1,2-Dichloropropane	9.29	0.04	0.20	ug/L	10.0		92.9	80-120	0.71	30	
Bromodichloromethane	10.0	0.05	0.20	ug/L	10.0		100	80-121	1.86	30	
Dibromomethane	9.62	0.15	0.20	ug/L	10.0		96.2	80-120	0.77	30	
2-Chloroethyl vinyl ether	8.17	0.25	1.00	ug/L	10.0		81.7	74-127	0.26	30	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0521 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BIA0521-BSD2)					Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 09:30						
4-Methyl-2-Pentanone	46.5	0.97	5.00	ug/L	50.0		93.1	67-133	1.93	30	
cis-1,3-Dichloropropene	8.77	0.06	0.20	ug/L	10.0		87.7	80-124	1.64	30	
Toluene	9.57	0.04	0.20	ug/L	10.0		95.7	80-120	0.21	30	
trans-1,3-Dichloropropene	7.94	0.08	0.20	ug/L	10.0		79.4	71-127	1.18	30	Q
2-Hexanone	46.8	0.90	5.00	ug/L	50.0		93.6	69-133	2.99	30	
1,1,2-Trichloroethane	9.64	0.13	0.20	ug/L	10.0		96.4	80-121	1.26	30	
1,3-Dichloropropane	9.66	0.06	0.20	ug/L	10.0		96.6	80-120	2.36	30	
Tetrachloroethene	9.89	0.05	0.20	ug/L	10.0		98.9	80-120	0.34	30	
Dibromochloromethane	9.42	0.05	0.20	ug/L	10.0		94.2	65-135	3.13	30	
1,2-Dibromoethane	10.0	0.07	0.20	ug/L	10.0		100	80-121	0.66	30	
Chlorobenzene	9.81	0.02	0.20	ug/L	10.0		98.1	80-120	1.44	30	
Ethylbenzene	9.75	0.04	0.20	ug/L	10.0		97.5	80-120	1.85	30	
1,1,1,2-Tetrachloroethane	10.6	0.04	0.20	ug/L	10.0		106	80-120	2.06	30	
m,p-Xylene	20.7	0.05	0.40	ug/L	20.0		103	80-121	1.05	30	
o-Xylene	10.5	0.03	0.20	ug/L	10.0		105	80-121	1.15	30	
Xylenes, total	31.2	0.09	0.60	ug/L	30.0		104	76-127	1.08	30	
Styrene	10.8	0.05	0.20	ug/L	10.0		108	80-124	1.31	30	
Bromoform	8.58	0.06	0.20	ug/L	10.0		85.8	51-134	2.41	30	
1,1,2,2-Tetrachloroethane	9.19	0.06	0.20	ug/L	10.0		91.9	77-123	1.41	30	
1,2,3-Trichloropropane	8.83	0.13	0.50	ug/L	10.0		88.3	76-125	2.25	30	
trans-1,4-Dichloro 2-Butene	9.12	0.32	1.00	ug/L	10.0		91.2	55-129	3.64	30	
n-Propylbenzene	10.1	0.02	0.20	ug/L	10.0		101	78-130	1.76	30	
Bromobenzene	9.55	0.06	0.20	ug/L	10.0		95.5	80-120	0.46	30	
Isopropyl Benzene	10.6	0.02	0.20	ug/L	10.0		106	80-128	1.81	30	
2-Chlorotoluene	10.7	0.02	0.20	ug/L	10.0		107	78-122	0.59	30	
4-Chlorotoluene	10.1	0.02	0.20	ug/L	10.0		101	80-121	1.75	30	
t-Butylbenzene	10.7	0.03	0.20	ug/L	10.0		107	78-125	0.94	30	
1,3,5-Trimethylbenzene	10.4	0.02	0.20	ug/L	10.0		104	80-129	0.70	30	
1,2,4-Trimethylbenzene	10.6	0.02	0.20	ug/L	10.0		106	80-127	0.10	30	
s-Butylbenzene	10.6	0.02	0.20	ug/L	10.0		106	78-129	1.24	30	
4-Isopropyl Toluene	11.2	0.03	0.20	ug/L	10.0		112	79-130	0.41	30	
1,3-Dichlorobenzene	9.82	0.04	0.20	ug/L	10.0		98.2	80-120	0.36	30	
1,4-Dichlorobenzene	9.64	0.04	0.20	ug/L	10.0		96.4	80-120	0.06	30	
n-Butylbenzene	11.0	0.02	0.20	ug/L	10.0		110	74-129	1.36	30	
1,2-Dichlorobenzene	9.82	0.04	0.20	ug/L	10.0		98.2	80-120	0.35	30	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0521 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BIA0521-BSD2)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 09:30							
1,2-Dibromo-3-chloropropane	8.51	0.37	0.50	ug/L	10.0		85.1	62-123	1.83	30	
1,2,4-Trichlorobenzene	11.3	0.11	0.50	ug/L	10.0		113	64-124	1.39	30	
Hexachloro-1,3-Butadiene	11.0	0.07	0.50	ug/L	10.0		110	58-123	7.84	30	
Naphthalene	10.1	0.12	0.50	ug/L	10.0		101	50-134	1.01	30	
1,2,3-Trichlorobenzene	11.3	0.11	0.50	ug/L	10.0		113	49-133	2.27	30	
Dichlorodifluoromethane	8.96	0.05	0.20	ug/L	10.0		89.6	48-147	2.73	30	
Methyl tert-butyl Ether	8.72	0.07	0.50	ug/L	10.0		87.2	71-132	0.67	30	
2-Pentanone	42.1	5.00	5.00	ug/L	50.0		84.2	69-134	0.55	30	
Surrogate: 1,2-Dichloroethane-d4	4.49			ug/L	*5.00*		*89.9*	*80-129*			
Surrogate: Toluene-d8	5.10			ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.30			ug/L	*5.00*		*106*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.18			ug/L	*5.00*		*104*	*80-120*			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0527 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0527-BLK1)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 11:19							
Chloromethane	ND	0.09	0.50	ug/L							U
Vinyl Chloride	ND	0.06	0.20	ug/L							U
Bromomethane	ND	0.25	1.00	ug/L							U
Chloroethane	ND	0.09	0.20	ug/L							U
Trichlorofluoromethane	ND	0.04	0.20	ug/L							U
Acrolein	ND	2.48	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.04	0.20	ug/L							U
Acetone	ND	2.06	5.00	ug/L							U
1,1-Dichloroethene	ND	0.05	0.20	ug/L							U
Bromoethane	ND	0.04	0.20	ug/L							U
Iodomethane	ND	0.23	1.00	ug/L							U
Methylene Chloride	ND	0.49	1.00	ug/L							U
Acrylonitrile	ND	0.60	1.00	ug/L							U
Carbon Disulfide	ND	0.04	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.05	0.20	ug/L							U
Vinyl Acetate	ND	0.07	0.20	ug/L							U
1,1-Dichloroethane	ND	0.05	0.20	ug/L							U
2-Butanone	ND	0.81	5.00	ug/L							U
2,2-Dichloropropane	ND	0.05	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.04	0.20	ug/L							U
Chloroform	ND	0.03	0.20	ug/L							U
Bromochloromethane	ND	0.06	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.04	0.20	ug/L							U
1,1-Dichloropropene	ND	0.03	0.20	ug/L							U
Carbon tetrachloride	ND	0.04	0.20	ug/L							U
1,2-Dichloroethane	ND	0.07	0.20	ug/L							U
Benzene	ND	0.03	0.20	ug/L							U
Trichloroethene	ND	0.05	0.20	ug/L							U
1,2-Dichloropropane	ND	0.04	0.20	ug/L							U
Bromodichloromethane	ND	0.05	0.20	ug/L							U
Dibromomethane	ND	0.15	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	0.25	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	0.97	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.06	0.20	ug/L							U
Toluene	ND	0.04	0.20	ug/L							U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0527 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0527-BLK1)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 11:19							
trans-1,3-Dichloropropene	ND	0.08	0.20	ug/L							U
2-Hexanone	ND	0.90	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.13	0.20	ug/L							U
1,3-Dichloropropane	ND	0.06	0.20	ug/L							U
Tetrachloroethene	ND	0.05	0.20	ug/L							U
Dibromochloromethane	ND	0.05	0.20	ug/L							U
1,2-Dibromoethane	ND	0.07	0.20	ug/L							U
Chlorobenzene	ND	0.02	0.20	ug/L							U
Ethylbenzene	ND	0.04	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.04	0.20	ug/L							U
m,p-Xylene	ND	0.05	0.40	ug/L							U
o-Xylene	ND	0.03	0.20	ug/L							U
Xylenes, total	ND	0.09	0.60	ug/L							U
Styrene	ND	0.05	0.20	ug/L							U
Bromoform	ND	0.06	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.06	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.13	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	0.32	1.00	ug/L							U
n-Propylbenzene	ND	0.02	0.20	ug/L							U
Bromobenzene	ND	0.06	0.20	ug/L							U
Isopropyl Benzene	ND	0.02	0.20	ug/L							U
2-Chlorotoluene	ND	0.02	0.20	ug/L							U
4-Chlorotoluene	ND	0.02	0.20	ug/L							U
t-Butylbenzene	ND	0.03	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.02	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.02	0.20	ug/L							U
s-Butylbenzene	ND	0.02	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.03	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.04	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.04	0.20	ug/L							U
n-Butylbenzene	0.03	0.02	0.20	ug/L							J
1,2-Dichlorobenzene	ND	0.04	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.37	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.11	0.50	ug/L							U
Hexachloro-1,3-Butadiene	0.15	0.07	0.50	ug/L							J

Seattle Public Utilities	Project: South Park Landfill	
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Volatile Organic Compounds - Quality Control

Batch BIA0527 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0527-BLK1)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 11:19							
Naphthalene	0.13	0.12	0.50	ug/L							J
1,2,3-Trichlorobenzene	ND	0.11	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.05	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.07	0.50	ug/L							U
2-Pentanone	ND	5.00	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.16			ug/L	*5.00*		*103*	*80-129*			
Surrogate: Toluene-d8	5.04			ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.94			ug/L	*5.00*		*98.9*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.99			ug/L	*5.00*		*99.9*	*80-120*			
LCS (BIA0527-BS1)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 09:55							
Chloromethane	9.01	0.09	0.50	ug/L	10.0		90.1	60-138			
Vinyl Chloride	11.8	0.06	0.20	ug/L	10.0		118	66-133			
Bromomethane	10.5	0.25	1.00	ug/L	10.0		105	72-131			
Chloroethane	11.3	0.09	0.20	ug/L	10.0		113	60-155			
Trichlorofluoromethane	11.6	0.04	0.20	ug/L	10.0		116	80-129			
Acrolein	56.7	2.48	5.00	ug/L	50.0		113	52-144			
1,1,2-Trichloro-1,2,2-Trifluoroethane	11.1	0.04	0.20	ug/L	10.0		111	76-129			
Acetone	49.0	2.06	5.00	ug/L	50.0		98.0	58-142			
1,1-Dichloroethene	10.6	0.05	0.20	ug/L	10.0		106	69-135			
Bromoethane	11.0	0.04	0.20	ug/L	10.0		110	78-128			
Iodomethane	10.7	0.23	1.00	ug/L	10.0		107	56-147			
Methylene Chloride	10.2	0.49	1.00	ug/L	10.0		102	65-135			
Acrylonitrile	10.6	0.60	1.00	ug/L	10.0		106	64-134			
Carbon Disulfide	12.1	0.04	0.20	ug/L	10.0		121	78-125			Q
trans-1,2-Dichloroethene	10.5	0.05	0.20	ug/L	10.0		105	78-128			
Vinyl Acetate	10.8	0.07	0.20	ug/L	10.0		108	55-138			
1,1-Dichloroethane	10.7	0.05	0.20	ug/L	10.0		107	76-124			
2-Butanone	50.7	0.81	5.00	ug/L	50.0		101	61-140			
2,2-Dichloropropane	11.3	0.05	0.20	ug/L	10.0		113	78-125			
cis-1,2-Dichloroethene	10.2	0.04	0.20	ug/L	10.0		102	80-121			
Chloroform	10.4	0.03	0.20	ug/L	10.0		104	80-122			
Bromochloromethane	10.0	0.06	0.20	ug/L	10.0		100	80-121			
1,1,1-Trichloroethane	10.3	0.04	0.20	ug/L	10.0		103	79-123			
1,1-Dichloropropene	10.2	0.03	0.20	ug/L	10.0		102	80-120			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0527 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BIA0527-BS1)					Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 09:55						
Carbon tetrachloride	10.8	0.04	0.20	ug/L	10.0		108	53-137			
1,2-Dichloroethane	9.67	0.07	0.20	ug/L	10.0		96.7	75-123			
Benzene	10.4	0.03	0.20	ug/L	10.0		104	80-120			
Trichloroethene	10.0	0.05	0.20	ug/L	10.0		100	80-120			
1,2-Dichloropropane	10.4	0.04	0.20	ug/L	10.0		104	80-120			
Bromodichloromethane	10.2	0.05	0.20	ug/L	10.0		102	80-121			
Dibromomethane	9.44	0.15	0.20	ug/L	10.0		94.4	80-120			
2-Chloroethyl vinyl ether	8.49	0.25	1.00	ug/L	10.0		84.9	74-127			
4-Methyl-2-Pentanone	49.2	0.97	5.00	ug/L	50.0		98.4	67-133			
cis-1,3-Dichloropropene	10.8	0.06	0.20	ug/L	10.0		108	80-124			
Toluene	10.0	0.04	0.20	ug/L	10.0		100	80-120			
trans-1,3-Dichloropropene	10.3	0.08	0.20	ug/L	10.0		103	71-127			
2-Hexanone	47.6	0.90	5.00	ug/L	50.0		95.3	69-133			
1,1,2-Trichloroethane	9.85	0.13	0.20	ug/L	10.0		98.5	80-121			
1,3-Dichloropropane	9.23	0.06	0.20	ug/L	10.0		92.3	80-120			
Tetrachloroethene	9.59	0.05	0.20	ug/L	10.0		95.9	80-120			
Dibromochloromethane	10.2	0.05	0.20	ug/L	10.0		102	65-135			
1,2-Dibromoethane	9.53	0.07	0.20	ug/L	10.0		95.3	80-121			
Chlorobenzene	9.63	0.02	0.20	ug/L	10.0		96.3	80-120			
Ethylbenzene	9.80	0.04	0.20	ug/L	10.0		98.0	80-120			
1,1,1,2-Tetrachloroethane	9.95	0.04	0.20	ug/L	10.0		99.5	80-120			
m,p-Xylene	19.3	0.05	0.40	ug/L	20.0		96.3	80-121			
o-Xylene	9.78	0.03	0.20	ug/L	10.0		97.8	80-121			
Xylenes, total	29.0	0.09	0.60	ug/L	30.0		96.8	76-127			
Styrene	10.2	0.05	0.20	ug/L	10.0		102	80-124			
Bromoform	9.31	0.06	0.20	ug/L	10.0		93.1	51-134			
1,1,2,2-Tetrachloroethane	9.02	0.06	0.20	ug/L	10.0		90.2	77-123			
1,2,3-Trichloropropane	8.04	0.13	0.50	ug/L	10.0		80.4	76-125			
trans-1,4-Dichloro 2-Butene	9.89	0.32	1.00	ug/L	10.0		98.9	55-129			
n-Propylbenzene	10.0	0.02	0.20	ug/L	10.0		100	78-130			
Bromobenzene	9.00	0.06	0.20	ug/L	10.0		90.0	80-120			
Isopropyl Benzene	9.86	0.02	0.20	ug/L	10.0		98.6	80-128			
2-Chlorotoluene	9.63	0.02	0.20	ug/L	10.0		96.3	78-122			
4-Chlorotoluene	9.49	0.02	0.20	ug/L	10.0		94.9	80-121			
t-Butylbenzene	10.0	0.03	0.20	ug/L	10.0		100	78-125			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0527 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BIA0527-BS1)					Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 09:55						
1,3,5-Trimethylbenzene	9.96	0.02	0.20	ug/L	10.0		99.6	80-129			
1,2,4-Trimethylbenzene	9.90	0.02	0.20	ug/L	10.0		99.0	80-127			
s-Butylbenzene	10.1	0.02	0.20	ug/L	10.0		101	78-129			
4-Isopropyl Toluene	9.92	0.03	0.20	ug/L	10.0		99.2	79-130			
1,3-Dichlorobenzene	9.45	0.04	0.20	ug/L	10.0		94.5	80-120			
1,4-Dichlorobenzene	9.46	0.04	0.20	ug/L	10.0		94.6	80-120			
n-Butylbenzene	10.3	0.02	0.20	ug/L	10.0		103	74-129			
1,2-Dichlorobenzene	9.22	0.04	0.20	ug/L	10.0		92.2	80-120			
1,2-Dibromo-3-chloropropane	9.19	0.37	0.50	ug/L	10.0		91.9	62-123			
1,2,4-Trichlorobenzene	9.68	0.11	0.50	ug/L	10.0		96.8	64-124			
Hexachloro-1,3-Butadiene	12.5	0.07	0.50	ug/L	10.0		125	58-123			Q
Naphthalene	9.21	0.12	0.50	ug/L	10.0		92.1	50-134			
1,2,3-Trichlorobenzene	9.03	0.11	0.50	ug/L	10.0		90.3	49-133			
Dichlorodifluoromethane	13.2	0.05	0.20	ug/L	10.0		132	48-147			Q
Methyl tert-butyl Ether	10.1	0.07	0.50	ug/L	10.0		101	71-132			
2-Pentanone	46.7	5.00	5.00	ug/L	50.0		93.3	69-134			
Surrogate: 1,2-Dichloroethane-d4	5.01			ug/L	*5.00*		*100*	*80-129*			
Surrogate: Toluene-d8	5.11			ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.01			ug/L	*5.00*		*100*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.20			ug/L	*5.00*		*104*	*80-120*			
LCS Dup (BIA0527-BSD1)					Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 10:23						
Chloromethane	8.28	0.09	0.50	ug/L	10.0		82.8	60-138	8.43	30	
Vinyl Chloride	11.1	0.06	0.20	ug/L	10.0		111	66-133	6.04	30	
Bromomethane	9.66	0.25	1.00	ug/L	10.0		96.6	72-131	7.92	30	
Chloroethane	10.4	0.09	0.20	ug/L	10.0		104	60-155	8.12	30	
Trichlorofluoromethane	9.76	0.04	0.20	ug/L	10.0		97.6	80-129	17.40	30	
Acrolein	53.6	2.48	5.00	ug/L	50.0		107	52-144	5.63	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	10.4	0.04	0.20	ug/L	10.0		104	76-129	6.20	30	
Acetone	47.9	2.06	5.00	ug/L	50.0		95.7	58-142	2.39	30	
1,1-Dichloroethene	10.1	0.05	0.20	ug/L	10.0		101	69-135	4.82	30	
Bromoethane	10.4	0.04	0.20	ug/L	10.0		104	78-128	5.49	30	
Iodomethane	9.94	0.23	1.00	ug/L	10.0		99.4	56-147	7.14	30	
Methylene Chloride	9.83	0.49	1.00	ug/L	10.0		98.3	65-135	3.27	30	
Acrylonitrile	11.0	0.60	1.00	ug/L	10.0		110	64-134	3.59	30	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0527 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BIA0527-BSD1)					Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 10:23						
Carbon Disulfide	11.5	0.04	0.20	ug/L	10.0		115	78-125	5.43	30	Q
trans-1,2-Dichloroethene	9.62	0.05	0.20	ug/L	10.0		96.2	78-128	8.54	30	
Vinyl Acetate	10.3	0.07	0.20	ug/L	10.0		103	55-138	5.03	30	
1,1-Dichloroethane	9.93	0.05	0.20	ug/L	10.0		99.3	76-124	7.28	30	
2-Butanone	50.2	0.81	5.00	ug/L	50.0		100	61-140	1.00	30	
2,2-Dichloropropane	10.2	0.05	0.20	ug/L	10.0		102	78-125	10.40	30	
cis-1,2-Dichloroethene	9.83	0.04	0.20	ug/L	10.0		98.3	80-121	3.30	30	
Chloroform	9.72	0.03	0.20	ug/L	10.0		97.2	80-122	6.39	30	
Bromochloromethane	9.45	0.06	0.20	ug/L	10.0		94.5	80-121	5.98	30	
1,1,1-Trichloroethane	9.88	0.04	0.20	ug/L	10.0		98.8	79-123	4.30	30	
1,1-Dichloropropene	9.68	0.03	0.20	ug/L	10.0		96.8	80-120	4.92	30	
Carbon tetrachloride	10.2	0.04	0.20	ug/L	10.0		102	53-137	5.80	30	
1,2-Dichloroethane	9.46	0.07	0.20	ug/L	10.0		94.6	75-123	2.18	30	
Benzene	9.78	0.03	0.20	ug/L	10.0		97.8	80-120	6.03	30	
Trichloroethene	9.57	0.05	0.20	ug/L	10.0		95.7	80-120	4.37	30	
1,2-Dichloropropane	9.87	0.04	0.20	ug/L	10.0		98.7	80-120	5.24	30	
Bromodichloromethane	9.90	0.05	0.20	ug/L	10.0		99.0	80-121	2.95	30	
Dibromomethane	9.16	0.15	0.20	ug/L	10.0		91.6	80-120	2.98	30	
2-Chloroethyl vinyl ether	8.99	0.25	1.00	ug/L	10.0		89.9	74-127	5.77	30	
4-Methyl-2-Pentanone	49.9	0.97	5.00	ug/L	50.0		99.9	67-133	1.48	30	
cis-1,3-Dichloropropene	10.3	0.06	0.20	ug/L	10.0		103	80-124	4.56	30	
Toluene	9.71	0.04	0.20	ug/L	10.0		97.1	80-120	3.33	30	
trans-1,3-Dichloropropene	10.2	0.08	0.20	ug/L	10.0		102	71-127	0.67	30	
2-Hexanone	49.4	0.90	5.00	ug/L	50.0		98.8	69-133	3.61	30	
1,1,2-Trichloroethane	9.74	0.13	0.20	ug/L	10.0		97.4	80-121	1.06	30	
1,3-Dichloropropane	9.07	0.06	0.20	ug/L	10.0		90.7	80-120	1.72	30	
Tetrachloroethene	9.16	0.05	0.20	ug/L	10.0		91.6	80-120	4.54	30	
Dibromochloromethane	10.0	0.05	0.20	ug/L	10.0		100	65-135	2.32	30	
1,2-Dibromoethane	9.57	0.07	0.20	ug/L	10.0		95.7	80-121	0.49	30	
Chlorobenzene	9.22	0.02	0.20	ug/L	10.0		92.2	80-120	4.32	30	
Ethylbenzene	9.37	0.04	0.20	ug/L	10.0		93.7	80-120	4.45	30	
1,1,1,2-Tetrachloroethane	9.82	0.04	0.20	ug/L	10.0		98.2	80-120	1.38	30	
m,p-Xylene	18.7	0.05	0.40	ug/L	20.0		93.6	80-121	2.84	30	
o-Xylene	9.48	0.03	0.20	ug/L	10.0		94.8	80-121	3.03	30	
Xylenes, total	28.2	0.09	0.60	ug/L	30.0		94.0	76-127	2.90	30	

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0527 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BIA0527-BSD1)				Prepared: 27-Jan-2020 Analyzed: 27-Jan-2020 10:23							
Styrene	9.69	0.05	0.20	ug/L	10.0		96.9	80-124	4.92	30	
Bromoform	9.01	0.06	0.20	ug/L	10.0		90.1	51-134	3.34	30	
1,1,2,2-Tetrachloroethane	9.12	0.06	0.20	ug/L	10.0		91.2	77-123	1.11	30	
1,2,3-Trichloropropane	8.36	0.13	0.50	ug/L	10.0		83.6	76-125	3.84	30	
trans-1,4-Dichloro 2-Butene	9.50	0.32	1.00	ug/L	10.0		95.0	55-129	3.99	30	
n-Propylbenzene	9.42	0.02	0.20	ug/L	10.0		94.2	78-130	6.03	30	
Bromobenzene	8.64	0.06	0.20	ug/L	10.0		86.4	80-120	4.05	30	
Isopropyl Benzene	9.33	0.02	0.20	ug/L	10.0		93.3	80-128	5.46	30	
2-Chlorotoluene	9.24	0.02	0.20	ug/L	10.0		92.4	78-122	4.12	30	
4-Chlorotoluene	9.07	0.02	0.20	ug/L	10.0		90.7	80-121	4.59	30	
t-Butylbenzene	9.42	0.03	0.20	ug/L	10.0		94.2	78-125	6.21	30	
1,3,5-Trimethylbenzene	9.42	0.02	0.20	ug/L	10.0		94.2	80-129	5.57	30	
1,2,4-Trimethylbenzene	9.50	0.02	0.20	ug/L	10.0		95.0	80-127	4.14	30	
s-Butylbenzene	9.63	0.02	0.20	ug/L	10.0		96.3	78-129	4.89	30	
4-Isopropyl Toluene	9.51	0.03	0.20	ug/L	10.0		95.1	79-130	4.23	30	
1,3-Dichlorobenzene	8.96	0.04	0.20	ug/L	10.0		89.6	80-120	5.30	30	
1,4-Dichlorobenzene	9.04	0.04	0.20	ug/L	10.0		90.4	80-120	4.48	30	
n-Butylbenzene	9.55	0.02	0.20	ug/L	10.0		95.5	74-129	7.28	30	
1,2-Dichlorobenzene	8.86	0.04	0.20	ug/L	10.0		88.6	80-120	3.92	30	
1,2-Dibromo-3-chloropropane	9.05	0.37	0.50	ug/L	10.0		90.5	62-123	1.55	30	
1,2,4-Trichlorobenzene	9.35	0.11	0.50	ug/L	10.0		93.5	64-124	3.46	30	
Hexachloro-1,3-Butadiene	11.4	0.07	0.50	ug/L	10.0		114	58-123	8.95	30	Q
Naphthalene	9.17	0.12	0.50	ug/L	10.0		91.7	50-134	0.38	30	
1,2,3-Trichlorobenzene	8.99	0.11	0.50	ug/L	10.0		89.9	49-133	0.41	30	
Dichlorodifluoromethane	11.8	0.05	0.20	ug/L	10.0		118	48-147	10.90	30	Q
Methyl tert-butyl Ether	9.56	0.07	0.50	ug/L	10.0		95.6	71-132	5.39	30	
2-Pentanone	47.7	5.00	5.00	ug/L	50.0		95.4	69-134	2.23	30	
Surrogate: 1,2-Dichloroethane-d4	4.90			ug/L	*5.00*		*98.1*	*80-129*			
Surrogate: Toluene-d8	5.24			ug/L	*5.00*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.94			ug/L	*5.00*		*98.8*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.05			ug/L	*5.00*		*101*	*80-120*			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Volatile Organic Compounds - Quality Control

Batch BIA0570 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0570-BLK1)				Prepared: 28-Jan-2020 Analyzed: 28-Jan-2020 13:51						
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	4.91		ug/L	*5.00*		*98.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.69		ug/L	*5.00*		*93.8*	*80-120*			
LCS (BIA0570-BS1)				Prepared: 28-Jan-2020 Analyzed: 28-Jan-2020 08:05						
Gasoline Range Organics (Tol-Nap)	980	100	ug/L	1000		98.0	72-128			
Surrogate: Toluene-d8	5.01		ug/L	*5.00*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.06		ug/L	*5.00*		*101*	*80-120*			
LCS Dup (BIA0570-BSD1)				Prepared: 28-Jan-2020 Analyzed: 28-Jan-2020 08:45						
Gasoline Range Organics (Tol-Nap)	1050	100	ug/L	1000		105	72-128	6.74	30	
Surrogate: Toluene-d8	5.08		ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.03		ug/L	*5.00*		*101*	*80-120*			

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Semivolatile Organic Compounds - Quality Control

Batch BIA0595 - EPA 3510C SepF

Instrument: NT10 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0595-BLK1)	Prepared: 30-Jan-2020 Analyzed: 03-Feb-2020 16:51										
Phenol	ND	0.01	0.2	ug/L							U
bis(2-chloroethyl) ether	ND	0.03	0.2	ug/L							U
2-Chlorophenol	ND	0.03	0.2	ug/L							U
1,3-Dichlorobenzene	ND	0.03	0.2	ug/L							U
1,4-Dichlorobenzene	ND	0.03	0.2	ug/L							U
1,2-Dichlorobenzene	ND	0.03	0.2	ug/L							U
Benzyl Alcohol	ND	0.02	0.2	ug/L							U
2,2'-Oxybis(1-chloropropane)	ND	0.03	0.2	ug/L							U
2-Methylphenol	ND	0.03	0.2	ug/L							U
Hexachloroethane	ND	0.04	0.2	ug/L							U
N-Nitroso-di-n-Propylamine	ND	0.04	0.2	ug/L							U
4-Methylphenol	ND	0.03	0.2	ug/L							U
Nitrobenzene	ND	0.03	0.2	ug/L							U
Isophorone	ND	0.03	0.2	ug/L							U
2-Nitrophenol	ND	0.04	1.0	ug/L							U
2,4-Dimethylphenol	ND	0.3	1.0	ug/L							U
Bis(2-Chloroethoxy)methane	ND	0.03	0.2	ug/L							U
2,4-Dichlorophenol	ND	0.1	1.0	ug/L							U
1,2,4-Trichlorobenzene	ND	0.03	0.2	ug/L							U
Benzoic acid	ND	0.1	2.0	ug/L							U
4-Chloroaniline	ND	0.04	1.0	ug/L							U
Hexachlorobutadiene	ND	0.04	0.2	ug/L							U
4-Chloro-3-Methylphenol	ND	0.1	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	0.1	1.0	ug/L							U
2,4,6-Trichlorophenol	ND	0.2	1.0	ug/L							U
2,4,5-Trichlorophenol	ND	0.1	1.0	ug/L							U
2-Chloronaphthalene	ND	0.03	0.2	ug/L							U
2-Nitroaniline	ND	0.2	1.0	ug/L							U
Dimethylphthalate	ND	0.04	0.2	ug/L							U
2,6-Dinitrotoluene	ND	0.2	1.0	ug/L							U
3-Nitroaniline	ND	0.2	1.0	ug/L							U
2,4-Dinitrophenol	ND	0.2	2.0	ug/L							U
4-Nitrophenol	ND	0.06	1.0	ug/L							U
2,4-Dinitrotoluene	ND	0.1	1.0	ug/L							U
4-Chlorophenylphenyl ether	ND	0.02	0.2	ug/L							U

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Semivolatile Organic Compounds - Quality Control

Batch BIA0595 - EPA 3510C SepF

Instrument: NT10 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0595-BLK1)				Prepared: 30-Jan-2020 Analyzed: 03-Feb-2020 16:51							
Diethyl phthalate	ND	0.06	0.2	ug/L							U
4-Nitroaniline	ND	0.2	1.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	0.4	2.0	ug/L							U
N-Nitrosodiphenylamine	ND	0.03	0.2	ug/L							U
4-Bromophenyl phenyl ether	ND	0.02	0.2	ug/L							U
Hexachlorobenzene	ND	0.04	0.2	ug/L							U
Pentachlorophenol	ND	0.1	1.0	ug/L							U
Carbazole	ND	0.04	0.2	ug/L							U
Di-n-Butylphthalate	ND	0.05	0.2	ug/L							U
Butylbenzylphthalate	ND	0.07	0.2	ug/L							U
3,3'-Dichlorobenzidine	ND	0.3	1.0	ug/L							U
bis(2-Ethylhexyl)phthalate	ND	0.2	0.2	ug/L							U
Di-n-Octylphthalate	ND	0.05	0.2	ug/L							U
Surrogate: 2-Fluorophenol	3.67			ug/L	*7.50*		*48.9*	*30-160*			
Surrogate: Phenol-d5	1.92			ug/L	*7.50*		*25.5*	*30-160*			*
Surrogate: 2-Chlorophenol-d4	5.52			ug/L	*7.50*		*73.5*	*30-160*			
Surrogate: 1,2-Dichlorobenzene-d4	3.27			ug/L	*5.00*		*65.3*	*30-160*			
Surrogate: Nitrobenzene-d5	3.35			ug/L	*5.00*		*66.9*	*30-160*			
Surrogate: 2-Fluorobiphenyl	3.29			ug/L	*5.00*		*65.8*	*30-160*			
Surrogate: 2,4,6-Tribromophenol	5.45			ug/L	*7.50*		*72.7*	*30-160*			*Q*
Surrogate: p-Terphenyl-d14	4.01			ug/L	*5.00*		*80.2*	*30-160*			
LCS (BIA0595-BS1)				Prepared: 30-Jan-2020 Analyzed: 03-Feb-2020 17:27							
Phenol	1.8	0.01	0.2	ug/L	5.00		36.0	30-160			
bis(2-chloroethyl) ether	3.8	0.03	0.2	ug/L	5.00		75.8	30-160			
2-Chlorophenol	3.9	0.03	0.2	ug/L	5.00		78.0	30-160			
1,3-Dichlorobenzene	3.4	0.03	0.2	ug/L	5.00		67.8	30-160			
1,4-Dichlorobenzene	3.3	0.03	0.2	ug/L	5.00		66.8	30-160			
1,2-Dichlorobenzene	3.5	0.03	0.2	ug/L	5.00		70.7	30-160			
Benzyl Alcohol	2.7	0.02	0.2	ug/L	5.00		54.1	30-160			
2,2'-Oxybis(1-chloropropane)	3.4	0.03	0.2	ug/L	5.00		67.3	30-160			
2-Methylphenol	3.5	0.03	0.2	ug/L	5.00		69.4	30-160			
Hexachloroethane	3.0	0.04	0.2	ug/L	5.00		60.2	30-160			
N-Nitroso-di-n-Propylamine	3.8	0.04	0.2	ug/L	5.00		76.4	30-160			
4-Methylphenol	3.6	0.03	0.2	ug/L	5.00		71.3	30-160			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Semivolatile Organic Compounds - Quality Control

Batch BIA0595 - EPA 3510C SepF

Instrument: NT10 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BIA0595-BS1)					Prepared: 30-Jan-2020 Analyzed: 03-Feb-2020 17:27						
Nitrobenzene	3.3	0.03	0.2	ug/L	5.00		66.1	30-160			
Isophorone	3.8	0.03	0.2	ug/L	5.00		76.8	30-160			
2-Nitrophenol	3.9	0.04	1.0	ug/L	5.00		78.5	30-160			
2,4-Dimethylphenol	9.8	0.3	1.0	ug/L	15.0		65.4	30-160			
Bis(2-Chloroethoxy)methane	3.1	0.03	0.2	ug/L	5.00		62.4	30-160			
2,4-Dichlorophenol	12.5	0.1	1.0	ug/L	15.0		83.4	30-160			Q
1,2,4-Trichlorobenzene	2.9	0.03	0.2	ug/L	5.00		57.5	30-160			
Benzoic acid	6.6	0.1	2.0	ug/L	27.5		23.9	30-160			*
4-Chloroaniline	3.7	0.04	1.0	ug/L	15.0		24.8	30-160			*
Hexachlorobutadiene	2.8	0.04	0.2	ug/L	5.00		55.5	30-160			
4-Chloro-3-Methylphenol	11.3	0.1	1.0	ug/L	15.0		75.5	30-160			
Hexachlorocyclopentadiene	8.1	0.1	1.0	ug/L	15.0		54.2	30-160			
2,4,6-Trichlorophenol	13.0	0.2	1.0	ug/L	15.0		86.7	30-160			
2,4,5-Trichlorophenol	12.9	0.1	1.0	ug/L	15.0		85.9	30-160			
2-Chloronaphthalene	3.9	0.03	0.2	ug/L	5.00		77.4	30-160			
2-Nitroaniline	13.5	0.2	1.0	ug/L	15.0		89.7	30-160			
Dimethylphthalate	4.3	0.04	0.2	ug/L	5.00		86.5	30-160			
2,6-Dinitrotoluene	14.5	0.2	1.0	ug/L	15.0		96.5	30-160			
3-Nitroaniline	13.8	0.2	1.0	ug/L	15.0		92.0	30-160			
2,4-Dinitrophenol	20.2	0.2	2.0	ug/L	27.5		73.6	30-160			
4-Nitrophenol	2.9	0.06	1.0	ug/L	15.0		19.1	30-160			*, Q
2,4-Dinitrotoluene	15.4	0.1	1.0	ug/L	15.0		103	30-160			
4-Chlorophenylphenyl ether	3.9	0.02	0.2	ug/L	5.00		78.7	30-160			
Diethyl phthalate	4.4	0.06	0.2	ug/L	5.00		87.3	30-160			
4-Nitroaniline	13.2	0.2	1.0	ug/L	15.0		87.9	30-160			
4,6-Dinitro-2-methylphenol	23.9	0.4	2.0	ug/L	27.5		86.9	30-160			
N-Nitrosodiphenylamine	5.5	0.03	0.2	ug/L	5.00		110	30-160			
4-Bromophenyl phenyl ether	4.4	0.02	0.2	ug/L	5.00		88.1	30-160			
Hexachlorobenzene	4.2	0.04	0.2	ug/L	5.00		83.1	30-160			
Pentachlorophenol	10.9	0.1	1.0	ug/L	15.0		72.5	30-160			
Carbazole	4.7	0.04	0.2	ug/L	5.00		94.6	30-160			
Di-n-Butylphthalate	4.5	0.05	0.2	ug/L	5.00		90.3	30-160			
Butylbenzylphthalate	4.4	0.07	0.2	ug/L	5.00		88.1	30-160			
3,3'-Dichlorobenzidine	18.8	0.3	1.0	ug/L	15.0		125	30-160			Q
bis(2-Ethylhexyl)phthalate	4.4	0.2	0.2	ug/L	5.00		87.1	30-160			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Semivolatile Organic Compounds - Quality Control

Batch BIA0595 - EPA 3510C SepF

Instrument: NT10 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BIA0595-BS1)				Prepared: 30-Jan-2020 Analyzed: 03-Feb-2020 17:27							
Di-n-Octylphthalate	4.1	0.05	0.2	ug/L	5.00		82.6	30-160			
Surrogate: 2-Fluorophenol	3.96			ug/L	*7.50*		*52.8*	*30-160*			
Surrogate: Phenol-d5	2.53			ug/L	*7.50*		*33.7*	*30-160*			
Surrogate: 2-Chlorophenol-d4	5.98			ug/L	*7.50*		*79.7*	*30-160*			
Surrogate: 1,2-Dichlorobenzene-d4	3.30			ug/L	*5.00*		*66.0*	*30-160*			
Surrogate: Nitrobenzene-d5	3.29			ug/L	*5.00*		*65.7*	*30-160*			
Surrogate: 2-Fluorobiphenyl	3.73			ug/L	*5.00*		*74.6*	*30-160*			
Surrogate: 2,4,6-Tribromophenol	7.44			ug/L	*7.50*		*99.2*	*30-160*			
Surrogate: p-Terphenyl-d14	4.36			ug/L	*5.00*		*87.2*	*30-160*			

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Semivolatile Organic Compounds - SIM - Quality Control

Batch BIA0540 - EPA 3520C (Liq Liq)

Instrument: NT12 Analyst: JZ

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0540-BLK1)				Prepared: 30-Jan-2020 Analyzed: 31-Jan-2020 12:42							
1,4-Dioxane	ND	0.04	0.2	ug/L							U
Surrogate: 1,4-Dioxane-d8	6.48			ug/L	*10.0*		*64.8*	*33.6-120*			
LCS (BIA0540-BS1)				Prepared: 30-Jan-2020 Analyzed: 31-Jan-2020 13:07							
1,4-Dioxane	8.2	0.04	0.2	ug/L	10.0		81.7	39.9-120			
Surrogate: 1,4-Dioxane-d8	7.52			ug/L	*10.0*		*75.2*	*33.6-120*			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Semivolatile Organic Compounds - SIM - Quality Control

Batch BIA0542 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0542-BLK1)				Prepared: 27-Jan-2020 Analyzed: 01-Feb-2020 12:45							
Naphthalene	0.001	0.001	0.010	ug/L							J
2-Methylnaphthalene	ND	0.001	0.010	ug/L							U
1-Methylnaphthalene	ND	0.0009	0.010	ug/L							U
2-Chloronaphthalene	ND	0.001	0.010	ug/L							U
Acenaphthylene	ND	0.002	0.010	ug/L							U
Acenaphthene	ND	0.003	0.010	ug/L							U
Dibenzofuran	ND	0.002	0.010	ug/L							U
Fluorene	ND	0.002	0.010	ug/L							U
Phenanthrene	ND	0.001	0.010	ug/L							U
Anthracene	ND	0.001	0.010	ug/L							U
Carbazole	ND	0.001	0.010	ug/L							U
Fluoranthene	ND	0.002	0.010	ug/L							U
Pyrene	0.002	0.001	0.010	ug/L							J
Benzo(a)anthracene	0.002	0.0008	0.010	ug/L							J
Chrysene	0.002	0.0009	0.010	ug/L							J
Benzo(b)fluoranthene	0.002	0.0005	0.010	ug/L							J
Benzo(k)fluoranthene	ND	0.003	0.010	ug/L							U
Benzo(j)fluoranthene	ND	0.002	0.010	ug/L							U
Benzofluoranthenes, Total	ND	0.004	0.010	ug/L							U
Benzo(a)pyrene	ND	0.002	0.010	ug/L							U
Perylene	ND	0.006	0.010	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	0.001	0.010	ug/L							U
Dibenzo(a,h)anthracene	ND	0.001	0.010	ug/L							U
Benzo(g,h,i)perylene	ND	0.001	0.010	ug/L							U
Surrogate: 2-Methylnaphthalene-d10	0.245			ug/L	*0.300*		*81.8*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.276			ug/L	*0.300*		*91.8*	*29-120*			
Surrogate: Fluoranthene-d10	0.297			ug/L	*0.300*		*99.2*	*57-120*			
LCS (BIA0542-BS1)				Prepared: 27-Jan-2020 Analyzed: 01-Feb-2020 13:14							
Naphthalene	0.225	0.001	0.010	ug/L	0.300		74.9	37-120			
2-Methylnaphthalene	0.230	0.001	0.010	ug/L	0.300		76.8	37-120			
1-Methylnaphthalene	0.230	0.0009	0.010	ug/L	0.300		76.7	29-120			
2-Chloronaphthalene	0.221	0.001	0.010	ug/L	0.300		73.6	30-160			
Acenaphthylene	0.247	0.002	0.010	ug/L	0.300		82.5	41-120			
Acenaphthene	0.230	0.003	0.010	ug/L	0.300		76.5	41-120			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Semivolatile Organic Compounds - SIM - Quality Control

Batch BIA0542 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BIA0542-BS1)					Prepared: 27-Jan-2020 Analyzed: 01-Feb-2020 13:14						
Dibenzofuran	0.234	0.002	0.010	ug/L	0.300		78.0	38-120			
Fluorene	0.247	0.002	0.010	ug/L	0.300		82.4	43-120			
Phenanthrene	0.247	0.001	0.010	ug/L	0.300		82.3	41-120			
Anthracene	0.239	0.001	0.010	ug/L	0.300		79.7	40-120			
Carbazole	0.247	0.001	0.010	ug/L	0.300		82.4	30-160			
Fluoranthene	0.256	0.002	0.010	ug/L	0.300		85.2	45-120			
Pyrene	0.257	0.001	0.010	ug/L	0.300		85.5	41-120			
Benzo(a)anthracene	0.270	0.0008	0.010	ug/L	0.300		90.1	42-120			
Chrysene	0.249	0.0009	0.010	ug/L	0.300		82.9	44-120			
Benzo(b)fluoranthene	0.281	0.0005	0.010	ug/L	0.300		93.7	44-120			
Benzo(k)fluoranthene	0.270	0.003	0.010	ug/L	0.300		89.9	50-120			
Benzo(j)fluoranthene	0.261	0.002	0.010	ug/L	0.300		87.1	39-160			
Benzofluoranthenes, Total	0.812	0.004	0.010	ug/L	0.900		90.2	46-120			
Benzo(a)pyrene	0.251	0.002	0.010	ug/L	0.300		83.8	35-120			
Perylene	0.226	0.006	0.010	ug/L	0.300		75.3	30-160			
Indeno(1,2,3-cd)pyrene	0.264	0.001	0.010	ug/L	0.300		87.9	37-120			
Dibenzo(a,h)anthracene	0.259	0.001	0.010	ug/L	0.300		86.2	34-120			
Benzo(g,h,i)perylene	0.242	0.001	0.010	ug/L	0.300		80.7	38-120			
Surrogate: 2-Methylnaphthalene-d10	0.244			ug/L	*0.300*		*81.3*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.278			ug/L	*0.300*		*92.7*	*29-120*			
Surrogate: Fluoranthene-d10	0.272			ug/L	*0.300*		*90.6*	*57-120*			

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Petroleum Hydrocarbons - Quality Control

Batch BIA0587 - EPA 3510C SepF

Instrument: FID4 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0587-BLK1)				Prepared: 30-Jan-2020 Analyzed: 31-Jan-2020 09:46						
Diesel Range Organics (C12-C24)	ND	0.100	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.198		mg/L	*0.225*		*88.1*	*50-150*			
LCS (BIA0587-BS1)				Prepared: 30-Jan-2020 Analyzed: 31-Jan-2020 10:05						
Diesel Range Organics (C12-C24)	2.62	0.100	mg/L	3.00		87.3	56-120			
Surrogate: o-Terphenyl	0.206		mg/L	*0.225*		*91.4*	*50-150*			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Aroclor PCB - Quality Control

Batch BIA0568 - EPA 3510C SepF

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0568-BLK1)				Prepared: 28-Jan-2020 Analyzed: 30-Jan-2020 13:12							
Aroclor 1016	ND	0.002	0.010	ug/L							U
Aroclor 1221	ND	0.002	0.010	ug/L							U
Aroclor 1232	ND	0.002	0.010	ug/L							U
Aroclor 1242	ND	0.002	0.010	ug/L							U
Aroclor 1248	ND	0.002	0.010	ug/L							U
Aroclor 1254	ND	0.002	0.010	ug/L							U
Aroclor 1260	ND	0.003	0.010	ug/L							U
Aroclor 1262	ND	0.003	0.010	ug/L							U
Aroclor 1268	ND	0.003	0.010	ug/L							U
Surrogate: Decachlorobiphenyl	0.00931			ug/L	*0.0200*		*46.5*	*29-120*			
Surrogate: Tetrachlorometaxylene	0.00996			ug/L	*0.0200*		*49.8*	*32-120*			
Surrogate: Decachlorobiphenyl [2C]	0.00865			ug/L	*0.0200*		*43.2*	*29-120*			
Surrogate: Tetrachlorometaxylene [2C]	0.00975			ug/L	*0.0200*		*48.7*	*32-120*			
LCS (BIA0568-BS1)				Prepared: 28-Jan-2020 Analyzed: 30-Jan-2020 13:33							
Aroclor 1016	0.035	0.002	0.010	ug/L	0.0500		69.9	54-120			
Aroclor 1260	0.035	0.003	0.010	ug/L	0.0500		69.5	51-128			
Surrogate: Decachlorobiphenyl	0.00967			ug/L	*0.0200*		*48.4*	*29-120*			
Surrogate: Tetrachlorometaxylene	0.0100			ug/L	*0.0200*		*50.1*	*32-120*			
Surrogate: Decachlorobiphenyl [2C]	0.00910			ug/L	*0.0200*		*45.5*	*29-120*			
Surrogate: Tetrachlorometaxylene [2C]	0.00932			ug/L	*0.0200*		*46.6*	*32-120*			

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Metals and Metallic Compounds - Quality Control

Batch BIA0672 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS2 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0672-BLK1)						Prepared: 31-Jan-2020 Analyzed: 31-Jan-2020 16:37						
Chromium	52	ND	0.130	0.500	ug/L							U
Chromium	53	ND	0.0700	0.500	ug/L							U
Iron	54	ND	6.27	20.0	ug/L							U
Iron	57	1.56	1.40	20.0	ug/L							J
Lead	208	ND	0.0680	0.100	ug/L							U
Manganese	55	ND	0.0850	0.500	ug/L							U
Arsenic	75a	ND	0.0220	0.200	ug/L							U
Cadmium	111	ND	0.0300	0.100	ug/L							U
Cadmium	114	ND	0.0400	0.100	ug/L							U
Copper	63	ND	0.340	0.500	ug/L							U
Copper	65	ND	0.350	0.500	ug/L							U
Nickel	60	ND	0.0500	0.500	ug/L							U
Nickel	62	ND	0.220	0.500	ug/L							U
Zinc	66	1.82	0.820	4.00	ug/L							J
Zinc	67	1.97	0.940	4.00	ug/L							J
LCS (BIA0672-BS1)						Prepared: 31-Jan-2020 Analyzed: 31-Jan-2020 16:42						
Chromium	52	25.7	0.130	0.500	ug/L	25.0		103	80-120			
Chromium	53	24.8	0.0700	0.500	ug/L	25.0		99.3	80-120			
Iron	54	5020	6.27	20.0	ug/L	5000		100	80-120			
Iron	57	5060	1.40	20.0	ug/L	5000		101	80-120			
Lead	208	26.4	0.0680	0.100	ug/L	25.0		106	80-120			
Manganese	55	26.0	0.0850	0.500	ug/L	25.0		104	80-120			
Arsenic	75a	25.0	0.0220	0.200	ug/L	25.0		100	80-120			
Cadmium	111	25.7	0.0300	0.100	ug/L	25.0		103	80-120			
Cadmium	114	25.8	0.0400	0.100	ug/L	25.0		103	80-120			
Copper	63	25.5	0.340	0.500	ug/L	25.0		102	80-120			
Copper	65	25.5	0.350	0.500	ug/L	25.0		102	80-120			
Nickel	60	25.6	0.0500	0.500	ug/L	25.0		102	80-120			
Nickel	62	26.2	0.220	0.500	ug/L	25.0		105	80-120			
Zinc	66	83.9	0.820	4.00	ug/L	80.0		105	80-120			
Zinc	67	78.4	0.940	4.00	ug/L	80.0		98.0	80-120			
Duplicate (BIA0672-DUP1)			**Source: 20A0325-01**			Prepared: 31-Jan-2020 Analyzed: 31-Jan-2020 21:17						
Chromium	52	ND	0.130	0.500	ug/L		ND					U

Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Metals and Metallic Compounds - Quality Control

Batch BIA0672 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS2 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Duplicate (BIA0672-DUP1)			**Source: 20A0325-01**		Prepared: 31-Jan-2020 Analyzed: 31-Jan-2020 21:17							
Iron	54	1770	6.27	20.0	ug/L		1790			1.32	20	
Lead	208	0.457	0.0680	0.100	ug/L		0.480			4.91	20	
Manganese	55	34.1	0.0850	0.500	ug/L		34.2			0.32	20	
Arsenic	75a	3.70	0.0220	0.200	ug/L		3.72			0.70	20	
Cadmium	111	0.463	0.0300	0.100	ug/L		0.511			9.86	20	
Copper	63	5.31	0.340	0.500	ug/L		5.31			0.15	20	
Nickel	60	9.25	0.0500	0.500	ug/L		9.29			0.43	20	
Zinc	67	94.2	0.940	4.00	ug/L		95.4			1.24	20	
Matrix Spike (BIA0672-MS1)			**Source: 20A0325-01**		Prepared: 31-Jan-2020 Analyzed: 31-Jan-2020 21:23							
Chromium	52	21.9	0.130	0.500	ug/L	25.0	ND	87.4	75-125			
Iron	54	5890	6.27	20.0	ug/L	5000	1790	81.9	75-125			
Lead	208	25.0	0.0680	0.100	ug/L	25.0	0.480	98.0	75-125			
Manganese	55	53.4	0.0850	0.500	ug/L	25.0	34.2	77.1	75-125			
Arsenic	75a	28.5	0.0220	0.200	ug/L	25.0	3.72	99.0	75-125			
Cadmium	111	24.5	0.0300	0.100	ug/L	25.0	0.511	96.1	75-125			
Copper	63	29.3	0.340	0.500	ug/L	25.0	5.31	95.8	75-125			
Nickel	60	34.1	0.0500	0.500	ug/L	25.0	9.29	99.1	75-125			
Zinc	67	160	0.940	4.00	ug/L	80.0	95.4	81.0	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Metals and Metallic Compounds - Quality Control

Batch BIB0115 - TLM EPA 7470A low level

Instrument: HYDRA Analyst: JPK

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIB0115-BLK1)					Prepared: 06-Feb-2020 Analyzed: 07-Feb-2020 15:40						
Mercury	0.000011	0.000010	0.000020	mg/L							J
LCS (BIB0115-BS1)					Prepared: 06-Feb-2020 Analyzed: 07-Feb-2020 15:43						
Mercury	0.000181	0.000010	0.000020	mg/L	0.000200		90.7	80-120			
Duplicate (BIB0115-DUP1)		**Source: 20A0325-01**			Prepared: 06-Feb-2020 Analyzed: 07-Feb-2020 15:49						
Mercury	0.000011	0.000010	0.000020	mg/L		ND					J
Matrix Spike (BIB0115-MS1)		**Source: 20A0325-01**			Prepared: 06-Feb-2020 Analyzed: 07-Feb-2020 15:52						
Mercury	0.000114	0.000010	0.000020	mg/L	0.000100	ND	114	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BIA0571 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0571-BLK1)					Prepared: 28-Jan-2020 Analyzed: 29-Jan-2020 16:06							
Chromium, Dissolved	52	ND	0.130	0.500	ug/L							U
Chromium, Dissolved	53	ND	0.0700	0.500	ug/L							U
Lead, Dissolved	208	ND	0.0680	0.100	ug/L							U
Arsenic, Dissolved	75a	ND	0.0220	0.200	ug/L							U
Cadmium, Dissolved	111	ND	0.0300	0.100	ug/L							U
Cadmium, Dissolved	114	ND	0.0400	0.100	ug/L							U
Copper, Dissolved	63	ND	0.340	0.500	ug/L							U
Copper, Dissolved	65	ND	0.350	0.500	ug/L							U
Zinc, Dissolved	66	1.71	0.820	4.00	ug/L							J
Zinc, Dissolved	67	1.56	0.940	4.00	ug/L							J
Blank (BIA0571-BLK2)					Prepared: 28-Jan-2020 Analyzed: 30-Jan-2020 16:59							
Iron, Dissolved	54	ND	6.27	20.0	ug/L							U
Iron, Dissolved	57	ND	1.40	20.0	ug/L							U
LCS (BIA0571-BS1)					Prepared: 28-Jan-2020 Analyzed: 29-Jan-2020 16:10							
Chromium, Dissolved	52	25.2	0.130	0.500	ug/L	25.0		101	80-120			
Chromium, Dissolved	53	26.2	0.0700	0.500	ug/L	25.0		105	80-120			
Lead, Dissolved	208	25.5	0.0680	0.100	ug/L	25.0		102	80-120			
Arsenic, Dissolved	75a	24.9	0.0220	0.200	ug/L	25.0		99.6	80-120			
Cadmium, Dissolved	111	24.8	0.0300	0.100	ug/L	25.0		99.2	80-120			
Cadmium, Dissolved	114	24.5	0.0400	0.100	ug/L	25.0		98.1	80-120			
Copper, Dissolved	63	25.5	0.340	0.500	ug/L	25.0		102	80-120			
Copper, Dissolved	65	25.2	0.350	0.500	ug/L	25.0		101	80-120			
Zinc, Dissolved	66	80.9	0.820	4.00	ug/L	80.0		101	80-120			
Zinc, Dissolved	67	74.5	0.940	4.00	ug/L	80.0		93.1	80-120			
LCS (BIA0571-BS2)					Prepared: 28-Jan-2020 Analyzed: 30-Jan-2020 17:02							
Iron, Dissolved	54	4890	6.27	20.0	ug/L	5000		97.7	80-120			
Iron, Dissolved	57	4910	1.40	20.0	ug/L	5000		98.3	80-120			

Instrument: ICPMS2 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0571-BLK3)					Prepared: 28-Jan-2020 Analyzed: 30-Jan-2020 18:56							

Seattle Public Utilities	Project: South Park Landfill	
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Metals and Metallic Compounds (dissolved) - Quality Control

Batch BIA0571 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS2 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIA0571-BLK3)					Prepared: 28-Jan-2020 Analyzed: 30-Jan-2020 18:56							
Manganese, Dissolved	55	ND	0.0850	0.500	ug/L							U
Nickel, Dissolved	60	ND	0.0500	0.500	ug/L							U
Nickel, Dissolved	62	ND	0.220	0.500	ug/L							U
LCS (BIA0571-BS3)					Prepared: 28-Jan-2020 Analyzed: 30-Jan-2020 19:00							
Manganese, Dissolved	55	25.0	0.0850	0.500	ug/L	25.0		100	80-120			
Nickel, Dissolved	60	25.1	0.0500	0.500	ug/L	25.0		101	80-120			
Nickel, Dissolved	62	25.1	0.220	0.500	ug/L	25.0		100	80-120			

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Seattle Public Utilities	Project: South Park Landfill	
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Seattle WA, 98124-4018	Project Manager: Jeff Neuner	11-Feb-2020 09:22

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BIB0116 - TLM EPA 7470A low level

Instrument: HYDRA Analyst: JPK

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIB0116-BLK1)					Prepared: 06-Feb-2020	Analyzed: 07-Feb-2020 16:25					
Mercury, Dissolved	0.000011	0.000010	0.000020	mg/L							J
LCS (BIB0116-BS1)					Prepared: 06-Feb-2020	Analyzed: 07-Feb-2020 16:28					
Mercury, Dissolved	0.000180	0.000010	0.000020	mg/L	0.000200		89.9	80-120			
Duplicate (BIB0116-DUP1)		**Source: 20A0325-02**			Prepared: 06-Feb-2020	Analyzed: 07-Feb-2020 16:34					
Mercury, Dissolved	ND	0.000010	0.000020	mg/L		ND					U
Matrix Spike (BIB0116-MS1)		**Source: 20A0325-02**			Prepared: 06-Feb-2020	Analyzed: 07-Feb-2020 16:37					
Mercury, Dissolved	0.000102	0.000010	0.000020	mg/L	0.000100	ND	102	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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Certified Analyses included in this Report

Analyte	Certifications
EPA 6020A in Water	
Chromium-52	NELAP,WADOE,DoD-ELAP,ADEC
Chromium-53	NELAP,WADOE,DoD-ELAP,ADEC
Iron-54	NELAP,WADOE,DoD-ELAP
Iron-57	NELAP,WADOE,DoD-ELAP
Manganese-55	NELAP,WADOE,DoD-ELAP
Lead-208	NELAP,WADOE,DoD-ELAP,ADEC
Chromium-52	NELAP,WADOE,DoD-ELAP,ADEC
Chromium-53	NELAP,WADOE,DoD-ELAP,ADEC
Iron-54	NELAP,WADOE,DoD-ELAP
Iron-57	NELAP,WADOE,DoD-ELAP
Manganese-55	NELAP,WADOE,DoD-ELAP
Lead-208	NELAP,WADOE,DoD-ELAP,ADEC
EPA 6020A UCT-KED in Water	
Arsenic-75a	WADOE,WA-DW,DoD-ELAP,ADEC,NELAP
Cadmium-111	NELAP,WADOE,DoD-ELAP,ADEC
Cadmium-114	NELAP,WADOE,DoD-ELAP,ADEC
Copper-63	NELAP,WADOE,DoD-ELAP
Copper-65	NELAP,WADOE,DoD-ELAP
Nickel-60	NELAP,WADOE,DoD-ELAP,ADEC
Nickel-62	NELAP,WADOE,DoD-ELAP,ADEC
Zinc-66	WADOE,WA-DW,DoD-ELAP
Zinc-67	WADOE,WA-DW,DoD-ELAP
Arsenic-75a	NELAP,WADOE,DoD-ELAP,ADEC
Cadmium-111	NELAP,WADOE,DoD-ELAP,ADEC
Cadmium-114	NELAP,WADOE,DoD-ELAP,ADEC
Copper-63	NELAP,WADOE,DoD-ELAP
Copper-65	NELAP,WADOE,DoD-ELAP
Nickel-60	NELAP,WADOE,DoD-ELAP,ADEC
Nickel-62	NELAP,WADOE,DoD-ELAP,ADEC
Zinc-66	NELAP,WADOE,DoD-ELAP
Zinc-67	NELAP,WADOE,DoD-ELAP
EPA 7470A in Water	
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
Mercury	WADOE,NELAP,DoD-ELAP,CALAP

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EPA 8082A in Water

Aroclor 1016	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

EPA 8260C in Water

Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrolein	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Butanone	DoD-ELAP,NELAP,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE

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cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE

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1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

EPA 8270D in Water

Phenol	NELAP,DoD-ELAP
bis(2-chloroethyl) ether	NELAP,DoD-ELAP
2-Chlorophenol	NELAP,DoD-ELAP
1,3-Dichlorobenzene	NELAP,DoD-ELAP
1,4-Dichlorobenzene	NELAP,DoD-ELAP
1,2-Dichlorobenzene	NELAP,DoD-ELAP
Benzyl Alcohol	NELAP,DoD-ELAP
2,2'-Oxybis(1-chloropropane)	NELAP,DoD-ELAP
2-Methylphenol	NELAP,DoD-ELAP
Hexachloroethane	NELAP,DoD-ELAP
N-Nitroso-di-n-Propylamine	NELAP,DoD-ELAP
4-Methylphenol	NELAP,DoD-ELAP
Nitrobenzene	NELAP,DoD-ELAP
Isophorone	NELAP,DoD-ELAP
2-Nitrophenol	NELAP,DoD-ELAP
2,4-Dimethylphenol	NELAP,DoD-ELAP
Bis(2-Chloroethoxy)methane	NELAP,DoD-ELAP
2,4-Dichlorophenol	NELAP,DoD-ELAP
1,2,4-Trichlorobenzene	NELAP,DoD-ELAP
Naphthalene	NELAP,DoD-ELAP
Benzoic acid	NELAP,DoD-ELAP
4-Chloroaniline	NELAP,DoD-ELAP

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Hexachlorobutadiene	NELAP,DoD-ELAP
4-Chloro-3-Methylphenol	NELAP,DoD-ELAP
2-Methylnaphthalene	NELAP,DoD-ELAP
Hexachlorocyclopentadiene	NELAP,DoD-ELAP
2,4,6-Trichlorophenol	NELAP,DoD-ELAP
2,4,5-Trichlorophenol	NELAP,DoD-ELAP
2-Chloronaphthalene	NELAP,DoD-ELAP
2-Nitroaniline	NELAP,DoD-ELAP
Acenaphthylene	NELAP,DoD-ELAP
Dimethylphthalate	NELAP,DoD-ELAP
2,6-Dinitrotoluene	NELAP,DoD-ELAP
Acenaphthene	NELAP,DoD-ELAP
3-Nitroaniline	NELAP,DoD-ELAP
2,4-Dinitrophenol	NELAP,DoD-ELAP
Dibenzofuran	NELAP,DoD-ELAP
4-Nitrophenol	NELAP,DoD-ELAP
2,4-Dinitrotoluene	NELAP,DoD-ELAP
Fluorene	NELAP,DoD-ELAP
4-Chlorophenylphenyl ether	NELAP,DoD-ELAP
Diethyl phthalate	NELAP,DoD-ELAP
4-Nitroaniline	NELAP,DoD-ELAP
4,6-Dinitro-2-methylphenol	NELAP,DoD-ELAP
N-Nitrosodiphenylamine	NELAP,DoD-ELAP
4-Bromophenyl phenyl ether	NELAP,DoD-ELAP
Hexachlorobenzene	NELAP,DoD-ELAP
Pentachlorophenol	NELAP,DoD-ELAP
Phenanthrene	NELAP,DoD-ELAP
Anthracene	NELAP,DoD-ELAP
Carbazole	NELAP,DoD-ELAP
Di-n-Butylphthalate	NELAP,DoD-ELAP
Fluoranthene	NELAP,DoD-ELAP
Pyrene	NELAP,DoD-ELAP
Butylbenzylphthalate	NELAP,DoD-ELAP
Benzo(a)anthracene	NELAP,DoD-ELAP
3,3'-Dichlorobenzidine	NELAP,DoD-ELAP
Chrysene	NELAP,DoD-ELAP
bis(2-Ethylhexyl)phthalate	NELAP,DoD-ELAP
Di-n-Octylphthalate	NELAP,DoD-ELAP
Benzo(b)fluoranthene	NELAP,DoD-ELAP
Benzo(k)fluoranthene	NELAP,DoD-ELAP

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Seattle Public Utilities	Project: South Park Landfill	
700-5th Ave, Ste 4900, Box 34018	Project Number: South Park Landfill	**Reported:**
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Benzofluoranthenes, Total	NELAP
Benzo(a)pyrene	NELAP,DoD-ELAP
Indeno(1,2,3-cd)pyrene	NELAP,DoD-ELAP
Dibenzo(a,h)anthracene	NELAP,DoD-ELAP
Benzo(g,h,i)perylene	NELAP,DoD-ELAP
N-Nitrosodimethylamine	NELAP,DoD-ELAP
1-Methylnaphthalene	NELAP,DoD-ELAP

EPA 8270D-SIM in Water

1,4-Dioxane	WADOE,NELAP,DoD-ELAP
Naphthalene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Biphenyl	NELAP
Acenaphthylene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Dibenzofuran	ADEC,DoD-ELAP,NELAP,CALAP
Fluorene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Carbazole	NELAP
Fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(e)pyrene	NELAP
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Perylene	ADEC,NELAP,CALAP
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE

NWTPH-Dx in Water

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE

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Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C25)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE

NWTPHg in Water

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	01/31/2021
CALAP	California Department of Public Health CAELAP	2748	06/30/2019
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	01/01/2021
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2020
WADOE	WA Dept of Ecology	C558	06/30/2019
WA-DW	Ecology - Drinking Water	C558	06/30/2019

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Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
J	Estimated concentration value detected below the reporting limit.
M	Estimated value for a GC/MS analyte detected and confirmed by an analyst but with low spectral match parameters.
NRS	This surrogate not reported due to chromatographic interference
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
Y1	Raised reporting limit due to interference
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.