

SENT VIA EMAIL

May 21, 2021
Parametrix No. 553-1550-067

Mr. Jerome Cruz, Project Manager
Washington State Department of Ecology
Toxics Cleanup Program
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Re: South Park Landfill April 2021 Progress Report

Dear Jerome:

This letter report provides an explanation of actions taken during the month of April.

General Activities During April

- SPU notified Ecology in writing on July 20, 2020, of SPU's intent to delay the landfill cap improvements and any redevelopment of the old South Transfer Station for a minimum of 24 months. The delay is needed to evaluate the project and complete the design of the required landfill cap improvements while maintaining the most flexibility for future use of the site allowed under the consent decree.
- The old South Transfer Station seep area (compactor shed) is fenced off and locked and all safeguards are still in place.
- In 2019 SPU had a contractor remove all identified asbestos containing materials on the buildings scheduled for demolition at SRDS. During the asbestos abatement PCB containing caulking was also removed and disposed of as PCB Bulk Product Waste along with the asbestos paneling it was on. As a precaution SPU tested the surficial soil around the building perimeter to ensure there are no residual PCB waste associated with the building. EPA Region 10 staff approved the sampling plan and sampling occurred in April. Test results will be summarized in a report and submitted to EPA and Ecology in June.
- Solid Waste Operations and Household Hazardous Waste Collection continues on the SPU old South Transfer Station property.
- The blowers of the gas system and an overview of the SPPD property were checked weekly. The current tenants First Student and commercial trailer parking are active onsite.
- The 2021 cap inspection was completed on April 22, 2021. A report summarizing the findings is underway and will be submitted to Ecology once it has been reviewed by SPU and SPPD.

Deviations from Samples, Required Tasks, CAP, or Schedule

There are no deviations to report.

inspired people. inspired solutions. making a difference.

SENT VIA EMAIL

Data Summary

The groundwater wells were monitored February 22 through 24, 2021. The monitoring samples were analyzed by Analytical Resources, Incorporated. Data validation is complete and a concentration trigger assessment for vinyl chloride was performed. A draft data summary table and the final lab reports are included as attachments to this progress report.

No further action is required for the 2021 first quarter monitoring event.

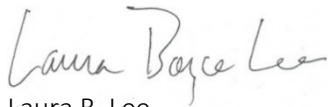
Upcoming Activities

- Ongoing weekly inspections of the SPPD gas system.
- Submit a report summarizing the April 22nd cap inspection to SPU and SPPD for review. A final report will be submitted to Ecology after property owner review is complete.
- Conduct the second quarter compliance monitoring the week of May 17, 2021.
- Respond to Ecology and others' comments on the redlined Clean Up Action Plan and the Updated IAWP.

If you have any questions regarding this progress report, please do not hesitate to contact me.

Sincerely,

PARAMETRIX



Laura B. Lee
Project Manager

cc: Jeff Neuner, SPU Landfill Closure Business Area Manager
Robert Howie, South Park Property Development LLC
Jeff Fowler, SPU, Solid Waste Line of Business Deputy Director
Susan Fife-Ferris, SPU, Solid Waste Line of Business/Solid Waste Planning Director
Megan J Joplin, SPU, Law Department, Attorney
Hui Yang, SPU, SRDS Redevelopment Project Manager
Lee Momon, SPU, Solid Waste Transfer Station Manager
Suzanne Hildreth, SPU, Solid Waste Transfer Station Manager
Aaron Werner, SPU, Project Management Division

Attachments

1 – First Quarter 2021 Groundwater Data



DRAFT Groundwater Quality Data Summary, First Quarter 2021, South Park Landfill

Parameter	Units	Cleanup Level	Upgradient Wells				Downgradient Wells											Trip Blanks		
			A-Zone				Perched Zone	A-Zone						B-Zone					MW-80	MW-81
			MW-12	MW-14	MW-29	MW-60 (MW-29 Dup)	MW-30 ¹	MW-25	MW-26	MW-27 ²	MW-31 ¹	MW-61 (MW-31 Dup)	MW-32	MW-33	MW-08	MW-10	MW-18	MW-24		
Field Parameters																				
Temperature	C		10.8	13.1	12.2	--	10.9	13.6	12.2	10.2	13.1	--	13.6	14.9	11.3	13.6	13.4	12.0	--	--
Dissolved Oxygen	mg/L		4.79	0.44	0.46	--	0.74	1.88	0.81	1.01	0.62	--	0.44	0.40	1.10	0.44	0.47	0.93	--	--
Specific Conductivity	µS/cm		558.6	453.8	777	--	473.1	986	199.1	263.0	417.0	--	839	1330	1248	1482	1161	979	--	--
pH	units		6.78	7.18	7.40	--	6.78	7.21	6.54	6.91	6.98	--	7.37	7.31	7.28	7.50	7.29	7.13	--	--
Redox	mv		266.7	4.2	-79.7	--	60.3	-51.5	63.6	61.8	-28.8	--	-63.3	-91.2	-56.6	-108.4	-52.1	-41.5	--	--
Turbidity	NTU		0.02	4.0	0.10	--	0.02	1.42	8.40	5.80	5.88	--	1.34	3.80	2.33	1.92	0.02	1.35	--	--
Metals																				
Arsenic, Dissolved	µg/L	5.0	0.292	--	--	--	--	0.295	0.712	0.823	--	--	1.16	0.845	0.200 U	0.200 U	0.200 U	0.200 U	--	--
Iron, Total	mg/L	27 A-Zone 31 B-Zone	0.0661	4.01	17.6	20.2	1.50	26.8	5.81	1.86	11.8	12.3	11.2	15.6	14.6	28.0	24.2	25.5	--	--
Manganese, Total	mg/L	2.2	0.0334	0.564	0.578	0.598	0.0617	2.12	0.0777	0.125	0.537	0.513	1.37	1.55	1.09	2.08	1.30	1.48	--	--
Volatile Organic Compounds																				
Vinyl Chloride	µg/L	0.29	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.463	0.0620	0.0200 U	0.167 J	0.357 ¹	0.162	0.114	0.0735	0.0755	0.0200 U	0.0226	0.0200 U	0.0200 U
Cis-1,2-Dichloroethene	µg/L	16	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.65	0.20 U	0.20 U	0.20 U	0.87	0.20 U	0.20 U	1.29	0.20 U	0.20 U	0.20 U	0.20 U
Benzene	µg/L	5.0	--	--	--	--	--	0.47	--	--	--	--	--	--	--	--	--	--	0.20 U	0.20 U

Notes:

¹ MW-30 and MW-31 monitor the former Glitsa property and are not CPOC wells.

² MW-27, a downgradient A-Zone well across SR 99 consistently has arsenic at concentrations greater than the CUL due to a cement kiln dust deposit that is across the street from the Settlement Area. MW-27 is not a CPOC well for arsenic.

█ = Exceeds cleanup level for CPOC wells

-- = Not sampled

U = The analyte was analyzed for but was not detected above the reported sample quantitation limit.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Abbreviations:

µg/L Micrograms per liter

mg/L Milligrams per liter

ng/L nanograms per liter

µS/cm microsiemens per centimeter

NTU Nephelometric Turbidity unit

CPOC Conditional point of compliance



23 March 2021

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

RE: South Park Landfill -Parametrix Water

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.

<u>Associated Work Order(s)</u>	<u>Associated SDG ID(s)</u>
21B0315	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 its entirety.



Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 21B0315	Turn-around Requested: 2 weeks	Date: 2/23/21
ARI Client Company: Jeff Neuner, Seattle Public Utility	Phone: 206 684-7693	Page: 1 of 1
Client Contact: Laura Lee, Parametrix	Phone: 206 394-3665	No. of Coolers: 1 Cooler Temps: 2.7

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

Client Project Name: South Park Landfill					Analysis Requested										Notes/Comments		
Client Project #: 553-1550-067		Samplers: Trey Parry			cis-1,2-DCE	cis-1,2-DCE, benzene	Vinyl Chloride	Total Fe, Mn	Dissolved As**								**Field-filtered
Sample ID	Date	Time	Matrix	Number of Containers													
SPL-GW-MW12-0221	2/22	15:35	water	8	X		X	X	X								
SPL-GW-MW14-0221	2/22	17:10	water	7	X		X	X									
SPL-GW-MW29-0221	2/23	10:25	water	13	X		X	X									MS/MSD
SPL-GW-MW18-0221	2/23	9:10	water	8	X		X	X	X								
SPL-GW-MW32-0221			water	8	X		X	X	X								
SPL-GW-MW33-0221			water	8	X		X	X	X								
SPL-GW-MW10-0221			water	8	X		X	X	X								
SPL-GW-MW60-0221	2/23	10:25	water	7	X		X	X									
SPL-GW-MW80-0221	2/22	8:00	water	2		X	X										
Comments/Special Instructions	Relinquished by: (Signature)		Received by: (Signature)			Relinquished by: (Signature)			Received by: (Signature)								
	Printed Name: Trey Parry		Printed Name: Jacob Walter			Printed Name:			Printed Name:								
	Company: AMY		Company: ARZ			Company:			Company:								
	Date & Time: 2/23/21 1632		Date & Time: 02/23/2021 1632			Date & Time:			Date & Time:								

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, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by work order or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

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

ARI Assigned Number: 21B0315	Turn-around Requested: 2 weeks	Date: 2/23/21
ARI Client Company: Jeff Neuner, Seattle Public Utility	Phone: 206 684-7693	Page: 2 of 2
Client Contact: Laura Lee, Parametrix	Phone: 206 394-3665	No. of Coolers: 2.7
		Cooler Temps:

Client Project Name: South Park Landfill					Analysis Requested										Notes/Comments			
Client Project #: 553-1550-067		Samplers: Trey Parry			cis-1,2-DCE	cis-1,2-DCE, benzene	Vinyl Chloride	Total Fe, Min	Dissolved As**									**Field-filtered
Sample ID	Date	Time	Matrix	Number of Containers														
SPL-GW-MW25-0221	2/23	1140	water	8		X	X	X	X									
SPL-GW-MW30-0221	2/23	1410	water	7	X		X	X										
SPL-GW-MW31-0221	2/23	1525	water	13	X		X	X										MS/MSD
SPL-GW-MW24-0221			water	8	X		X	X	X									
SPL-GW-MW26-0221			water	8	X		X	X	X									
SPL-GW-MW08-0221			water	8	X		X	X	X									
SPL-GW-MW27-0221			water	8	X		X	X	X									
SPL-GW-MW61-0221	2/23	1525	water	7	X		X	X										
SPL-GW-MW81-0221			water	2			X	X										
Comments/Special Instructions	Relinquished by: (Signature)		Received by: (Signature)		Relinquished by: (Signature)					Received by: (Signature)								
	Printed Name: Trey Parry		Printed Name: Scott Shultz		Printed Name:					Printed Name:								
	Company: ARI		Company: ARI		Company:					Company:								
	Date & Time: 2/23/21 16:32		Date & Time: 02/23/2021 16:32		Date & Time:					Date & Time:								

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, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by work order or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.



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

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SPL-GW-MW12-0221	21B0315-01	Water	22-Feb-2021 15:35	23-Feb-2021 16:32
SPL-GW-MW12-0221	21B0315-02	Water	22-Feb-2021 15:35	23-Feb-2021 16:32
SPL-GW-MW14-0221	21B0315-03	Water	22-Feb-2021 17:10	23-Feb-2021 16:32
SPL-GW-MW29-0221	21B0315-04	Water	23-Feb-2021 10:25	23-Feb-2021 16:32
SPL-GW-MW18-0221	21B0315-05	Water	23-Feb-2021 09:10	23-Feb-2021 16:32
SPL-GW-MW18-0221	21B0315-06	Water	23-Feb-2021 09:10	23-Feb-2021 16:32
SPL-GW-MW10-0221	21B0315-07	Water	23-Feb-2021 12:40	23-Feb-2021 16:32
SPL-GW-MW10-0221	21B0315-08	Water	23-Feb-2021 12:40	23-Feb-2021 16:32
SPL-GW-MW60-0221	21B0315-09	Water	23-Feb-2021 10:25	23-Feb-2021 16:32
SPL-GW-MW80-0221	21B0315-10	Water	22-Feb-2021 08:00	23-Feb-2021 16:32
SPL-GW-MW25-0221	21B0315-11	Water	23-Feb-2021 11:40	23-Feb-2021 16:32
SPL-GW-MW25-0221	21B0315-12	Water	23-Feb-2021 11:40	23-Feb-2021 16:32
SPL-GW-MW30-0221	21B0315-13	Water	23-Feb-2021 14:10	23-Feb-2021 16:32
SPL-GW-MW31-0221	21B0315-14	Water	23-Feb-2021 15:25	23-Feb-2021 16:32
SPL-GW-MW61-0221	21B0315-15	Water	23-Feb-2021 15:25	23-Feb-2021 16:32



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

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

Work Order Case Narrative

Client: Seattle Public Utilities
Project: South Park Landfill -Parametrix Water
Work Order: 21B0315

Revised Report - March 23, 2021

This report was revised to change reporting units for Dissolved Arsenic from mg/L to μ /L.

Revised Report - March 19, 2021

This report was revised to change metals by EPA Method 6020B reporting units from to mg/L and Vinyl Chloride by 8260D-SIM from ng/L to μ g/L.

Sample receipt

Samples as listed on the preceding page were received 23-Feb-2021 16:32 under ARI work order 21B0315. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles - EPA Method SW8260D

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.

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

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Sample specific QC was performed in association with sample 21B0315-04 in batch BJC0053. The matrix spike/matrix spike duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were within advisory control limits.

Volatiles - EPA Method 8260D-SIM (Selected Ion Monitoring)

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

Initial and continuing calibrations were within method requirements.



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

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

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 blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Sample specific QC was performed in association with sample 21B0315-04 in batch BJB0759 and in association with sample 21B0315-14 in batch BJC0017. The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Total and Dissolved Metals - EPA Method 6020B

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 blank spike (BS/LCS) percent recoveries were within control limits.

Sample specific QC was performed in association with sample 21B0315-04 in Total Metals batch BJC0200. The matrix spike/matrix spike duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were within advisory control limits. The duplicate (DUP) relative percent difference (RPD) were within advisory control limits.



WORK ORDER

21B0315

Client: Seattle Public Utilities	Project Manager: Shelly Fishel
Project: South Park Landfill -Parametrix Water	Project Number: 553-155-067

Preservation Confirmation

Container ID	Container Type	pH
21B0315-01 A	HDPE NM, 500 mL, 1:1 HNO3	<2 Pass
21B0315-01 B	VOA Vial, Clear, 40 mL, HCL	
21B0315-01 C	VOA Vial, Clear, 40 mL, HCL	
21B0315-01 D	VOA Vial, Clear, 40 mL, HCL	
21B0315-01 E	VOA Vial, Clear, 40 mL	
21B0315-01 F	VOA Vial, Clear, 40 mL	
21B0315-01 G	VOA Vial, Clear, 40 mL	
21B0315-02 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2 Pass
21B0315-03 A	HDPE NM, 500 mL, 1:1 HNO3	<2 Pass
21B0315-03 B	VOA Vial, Clear, 40 mL, HCL	
21B0315-03 C	VOA Vial, Clear, 40 mL, HCL	
21B0315-03 D	VOA Vial, Clear, 40 mL, HCL	
21B0315-03 E	VOA Vial, Clear, 40 mL	
21B0315-03 F	VOA Vial, Clear, 40 mL	
21B0315-03 G	VOA Vial, Clear, 40 mL	
21B0315-04 A	HDPE NM, 500 mL, 1:1 HNO3	<2 Pass
21B0315-04 B	VOA Vial, Clear, 40 mL, HCL	
21B0315-04 C	VOA Vial, Clear, 40 mL, HCL	
21B0315-04 D	VOA Vial, Clear, 40 mL, HCL	
21B0315-04 E	VOA Vial, Clear, 40 mL, HCL	
21B0315-04 F	VOA Vial, Clear, 40 mL, HCL	
21B0315-04 G	VOA Vial, Clear, 40 mL, HCL	
21B0315-04 H	VOA Vial, Clear, 40 mL	
21B0315-04 I	VOA Vial, Clear, 40 mL	
21B0315-04 J	VOA Vial, Clear, 40 mL	
21B0315-04 K	VOA Vial, Clear, 40 mL	
21B0315-04 L	VOA Vial, Clear, 40 mL	
21B0315-04 M	VOA Vial, Clear, 40 mL	
21B0315-05 A	HDPE NM, 500 mL, 1:1 HNO3	<2 Pass
21B0315-05 B	VOA Vial, Clear, 40 mL, HCL	
21B0315-05 C	VOA Vial, Clear, 40 mL, HCL	
21B0315-05 D	VOA Vial, Clear, 40 mL, HCL	
21B0315-05 E	VOA Vial, Clear, 40 mL	
21B0315-05 F	VOA Vial, Clear, 40 mL	
21B0315-05 G	VOA Vial, Clear, 40 mL	



WORK ORDER

21B0315

Client: Seattle Public Utilities	Project Manager: Shelly Fishel
Project: South Park Landfill -Parametrix Water	Project Number: 553-155-067

21B0315-06 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2 Pass
21B0315-07 A	HDPE NM, 500 mL, 1:1 HNO3	<2 Pass
21B0315-07 B	VOA Vial, Clear, 40 mL, HCL	
21B0315-07 C	VOA Vial, Clear, 40 mL, HCL	
21B0315-07 D	VOA Vial, Clear, 40 mL, HCL	
21B0315-07 E	VOA Vial, Clear, 40 mL	
21B0315-07 F	VOA Vial, Clear, 40 mL	
21B0315-07 G	VOA Vial, Clear, 40 mL	
21B0315-08 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2 Pass
21B0315-09 A	HDPE NM, 500 mL, 1:1 HNO3	<2 Pass
21B0315-09 B	VOA Vial, Clear, 40 mL, HCL	
21B0315-09 C	VOA Vial, Clear, 40 mL, HCL	
21B0315-09 D	VOA Vial, Clear, 40 mL, HCL	
21B0315-09 E	VOA Vial, Clear, 40 mL	
21B0315-09 F	VOA Vial, Clear, 40 mL	
21B0315-09 G	VOA Vial, Clear, 40 mL	
21B0315-10 A	VOA Vial, Clear, 40 mL, HCL	
21B0315-10 B	VOA Vial, Clear, 40 mL	
21B0315-11 A	HDPE NM, 500 mL, 1:1 HNO3	<2 Pass
21B0315-11 B	VOA Vial, Clear, 40 mL, HCL	
21B0315-11 C	VOA Vial, Clear, 40 mL, HCL	
21B0315-11 D	VOA Vial, Clear, 40 mL, HCL	
21B0315-11 E	VOA Vial, Clear, 40 mL	
21B0315-11 F	VOA Vial, Clear, 40 mL	
21B0315-11 G	VOA Vial, Clear, 40 mL	
21B0315-12 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2 Pass
21B0315-13 A	HDPE NM, 500 mL, 1:1 HNO3	<2 Pass
21B0315-13 B	VOA Vial, Clear, 40 mL, HCL	
21B0315-13 C	VOA Vial, Clear, 40 mL, HCL	
21B0315-13 D	VOA Vial, Clear, 40 mL, HCL	
21B0315-13 E	VOA Vial, Clear, 40 mL	
21B0315-13 F	VOA Vial, Clear, 40 mL	
21B0315-13 G	VOA Vial, Clear, 40 mL	
21B0315-14 A	HDPE NM, 500 mL, 1:1 HNO3	<2 Pass
21B0315-14 B	VOA Vial, Clear, 40 mL, HCL	
21B0315-14 C	VOA Vial, Clear, 40 mL, HCL	
21B0315-14 D	VOA Vial, Clear, 40 mL, HCL	



WORK ORDER

21B0315

Client: Seattle Public Utilities	Project Manager: Shelly Fishel
Project: South Park Landfill -Parametrix Water	Project Number: 553-155-067

21B0315-14 E	VOA Vial, Clear, 40 mL, HCL
21B0315-14 F	VOA Vial, Clear, 40 mL, HCL
21B0315-14 G	VOA Vial, Clear, 40 mL, HCL
21B0315-14 H	VOA Vial, Clear, 40 mL
21B0315-14 I	VOA Vial, Clear, 40 mL
21B0315-14 J	VOA Vial, Clear, 40 mL
21B0315-14 K	VOA Vial, Clear, 40 mL
21B0315-14 L	VOA Vial, Clear, 40 mL
21B0315-14 M	VOA Vial, Clear, 40 mL
21B0315-15 A	HDPE NM, 500 mL, 1:1 HNO3 <i>cz Pass</i>
21B0315-15 B	VOA Vial, Clear, 40 mL, HCL
21B0315-15 C	VOA Vial, Clear, 40 mL, HCL
21B0315-15 D	VOA Vial, Clear, 40 mL, HCL
21B0315-15 E	VOA Vial, Clear, 40 mL
21B0315-15 F	VOA Vial, Clear, 40 mL
21B0315-15 G	VOA Vial, Clear, 40 mL

KD

Preservation Confirmed By _____

2/24/21

Date _____

Reviewed By _____

Date _____



Cooler Receipt Form

ARI Client: SPU/ParametriX
 COC No(s): _____ (NA)
 Assigned ARI Job No: 21B0315

Project Name: South Park Landfill
 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 1632 _____ 27 _____
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: DOO 5206

Cooler Accepted by: JJ Date: 2/23/21 Time: 1632

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? 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? YES NO
 Date VOC Trip Blank was made at ARI: _____ (NA)
 Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: KD Date: 2/24/21 Time: 1130 Labels checked by: KD

**** 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:

SPL - GW - mw10 - 0221 crossed out on COC but received containers. client want to run samples. Sampled at 1240 on 2/23/21

By: KD Date: 2/24/21



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

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW12-0221
21B0315-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/22/2021 15:35
Instrument: NT2 Analyst: PKC Analyzed: 03/02/2021 15:23
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-01 C
Preparation Batch: BJC0053 Sample Size: 10 mL
Prepared: 03/02/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>107</i>	<i>%</i>	



Seattle Public Utilities
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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW12-0221
21B0315-01 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/22/2021 15:35
Instrument: NT16 Analyst: PB	Analyzed: 02/25/2021 22:08
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-01 E
	Preparation Batch: BJB0759 Sample Size: 10 mL
	Prepared: 02/25/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>92.4</i>	<i>%</i>	



Seattle Public Utilities
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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW12-0221
21B0315-01 (Water)

Metals and Metallic Compounds

Method: EPA 6020B		Sampled: 02/22/2021 15:35
Instrument: ICPMS1 Analyst: MCB		Analyzed: 03/11/2021 15:20
Sample Preparation:	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Extract ID: 21B0315-01 A 01
	Preparation Batch: BJC0200	Sample Size: 25 mL
	Prepared: 03/09/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	1	0.0200	0.0661	mg/L	
Manganese	7439-96-5	1	0.000500	0.0334	mg/L	



Seattle Public Utilities 700-5th Ave, Ste 4900, Box 34018 Seattle WA, 98124-4018	Project: South Park Landfill -Parametrix Water Project Number: 553-155-067 Project Manager: Jeff Neuner	Reported: 23-Mar-2021 09:52
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SPL-GW-MW12-0221
21B0315-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED	Sampled: 02/22/2021 15:35
Instrument: ICPMS1 Analyst: MCB	Analyzed: 02/27/2021 01:50
Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Extract ID: 21B0315-02 A 01
Preparation Batch: BJB0768	Sample Size: 25 mL
Prepared: 02/26/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	0.292	ug/L	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW14-0221
21B0315-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/22/2021 17:10
Instrument: NT2 Analyst: PKC Analyzed: 03/02/2021 15:43
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-03 C
Preparation Batch: BJC0053 Sample Size: 10 mL
Prepared: 03/02/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	110	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW14-0221
21B0315-03 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM Sampled: 02/22/2021 17:10
Instrument: NT16 Analyst: PB Analyzed: 02/25/2021 22:28
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-03 E
Preparation Batch: BJB0759 Sample Size: 10 mL
Prepared: 02/25/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>95.8</i>	<i>%</i>	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW14-0221
21B0315-03 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 02/22/2021 17:10

Instrument: ICPMS1 Analyst: MCB

Analyzed: 03/11/2021 17:23

Sample Preparation:

Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Extract ID: 21B0315-03 A 01

Preparation Batch: BJC0200

Sample Size: 25 mL

Prepared: 03/09/2021

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	10	0.200	4.01	mg/L	D
Manganese	7439-96-5	20	0.0100	0.564	mg/L	D



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW29-0221
21B0315-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Preparation Method: EPA 5030C (Purge and Trap)	Sampled: 02/23/2021 10:25
Instrument: NT2 Analyst: PKC	Preparation Batch: BJC0053	Analyzed: 03/02/2021 16:04
Sample Preparation:	Prepared: 03/02/2021	Extract ID: 21B0315-04 C
	Sample Size: 10 mL	
	Final Volume: 10 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	109	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW29-0221
21B0315-04 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/23/2021 10:25
Instrument: NT16 Analyst: PB	Analyzed: 02/25/2021 22:48
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-04 I
	Preparation Batch: BJB0759 Sample Size: 10 mL
	Prepared: 02/25/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>107</i>	<i>%</i>	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW29-0221
21B0315-04 (Water)

Metals and Metallic Compounds

Method: EPA 6020B Sampled: 02/23/2021 10:25
Instrument: ICPMS1 Analyst: MCB Analyzed: 03/11/2021 18:48
Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix Extract ID: 21B0315-04 A 01
Preparation Batch: BJC0200 Sample Size: 25 mL
Prepared: 03/09/2021 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	1	0.0200	17.6	mg/L	
Manganese	7439-96-5	20	0.0100	0.578	mg/L	D



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW18-0221
21B0315-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/23/2021 09:10
Instrument: NT2 Analyst: PKC Analyzed: 03/02/2021 16:24
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-05 C
Preparation Batch: BJC0053 Sample Size: 10 mL
Prepared: 03/02/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	107	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW18-0221
21B0315-05 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/23/2021 09:10
Instrument: NT16 Analyst: PB	Analyzed: 02/25/2021 23:08
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-05 E
	Preparation Batch: BJB0759 Sample Size: 10 mL
	Prepared: 02/25/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>105</i>	<i>%</i>	



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Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW18-0221
21B0315-05 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sampled: 02/23/2021 09:10
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BJC0200	Analyzed: 03/11/2021 17:31
Sample Preparation:	Prepared: 03/09/2021	Extract ID: 21B0315-05 A 01
	Sample Size: 25 mL	
	Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.400	24.2	mg/L	D
Manganese	7439-96-5	20	0.0100	1.30	mg/L	D



Seattle Public Utilities 700-5th Ave, Ste 4900, Box 34018 Seattle WA, 98124-4018	Project: South Park Landfill -Parametrix Water Project Number: 553-155-067 Project Manager: Jeff Neuner	Reported: 23-Mar-2021 09:52
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SPL-GW-MW18-0221
21B0315-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED	Sampled: 02/23/2021 09:10
Instrument: ICPMS1 Analyst: MCB	Analyzed: 02/27/2021 01:54
Sample Preparation:	Extract ID: 21B0315-06 A 01
Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	
Preparation Batch: BJB0768	Sample Size: 25 mL
Prepared: 02/26/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	ND	ug/L	U



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

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW10-0221
21B0315-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Preparation Method: EPA 5030C (Purge and Trap)	Sampled: 02/23/2021 12:40
Instrument: NT2 Analyst: PKC	Preparation Batch: BJC0053	Analyzed: 03/02/2021 16:44
Sample Preparation:	Sample Size: 10 mL	Extract ID: 21B0315-07 B
	Final Volume: 10 mL	
	Prepared: 03/02/2021	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	1.29	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	108	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW10-0221
21B0315-07 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/23/2021 12:40
Instrument: NT16 Analyst: PB	Analyzed: 02/25/2021 23:28
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-07 E
	Preparation Batch: BJB0759 Sample Size: 10 mL
	Prepared: 02/25/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0755	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>93.7</i>	<i>%</i>	



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Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW10-0221
21B0315-07 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sampled: 02/23/2021 12:40
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BJC0200	Analyzed: 03/11/2021 17:36
Sample Preparation:	Prepared: 03/09/2021	Extract ID: 21B0315-07 A 01
	Sample Size: 25 mL	
	Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.400	28.0	mg/L	D
Manganese	7439-96-5	20	0.0100	2.08	mg/L	D



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Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW10-0221
21B0315-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED	Sampled: 02/23/2021 12:40
Instrument: ICPMS1 Analyst: MCB	Analyzed: 02/27/2021 01:59
Sample Preparation:	Extract ID: 21B0315-08 A 01
Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	
Preparation Batch: BJB0768	Sample Size: 25 mL
Prepared: 02/26/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	ND	ug/L	U



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW60-0221
21B0315-09 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/23/2021 10:25
Instrument: NT2 Analyst: PKC Analyzed: 03/02/2021 17:04
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-09 C
Preparation Batch: BJC0053 Sample Size: 10 mL
Prepared: 03/02/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	105	%	



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Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW60-0221
21B0315-09 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM Sampled: 02/23/2021 10:25
Instrument: NT16 Analyst: PB Analyzed: 02/25/2021 23:48
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-09 E
Preparation Batch: BJB0759 Sample Size: 10 mL
Prepared: 02/25/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>99.4</i>	<i>%</i>	



Seattle Public Utilities
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Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW60-0221
21B0315-09 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sampled: 02/23/2021 10:25
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BJC0200	Analyzed: 03/11/2021 17:41
Sample Preparation:	Sample Size: 25 mL	Extract ID: 21B0315-09 A 01
	Prepared: 03/09/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.400	20.2	mg/L	D
Manganese	7439-96-5	20	0.0100	0.598	mg/L	D



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW80-0221
21B0315-10 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/22/2021 08:00
Instrument: NT2 Analyst: PKC Analyzed: 03/02/2021 13:00

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-10 A
Preparation Batch: BJC0053 Sample Size: 10 mL
Prepared: 03/02/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	106	%	
<i>Surrogate: Toluene-d8</i>			80-120 %	99.0	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW80-0221
21B0315-10 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/22/2021 08:00
Instrument: NT16 Analyst: PB	Analyzed: 02/26/2021 11:59
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-10 B
	Preparation Batch: BJB0774 Sample Size: 10 mL
	Prepared: 02/26/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>104</i>	<i>%</i>	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW25-0221
21B0315-11 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/23/2021 11:40
Instrument: NT2 Analyst: PKC Analyzed: 03/02/2021 17:24
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-11 B
Preparation Batch: BJC0053 Sample Size: 10 mL
Prepared: 03/02/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	0.47	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	106	%	
<i>Surrogate: Toluene-d8</i>			80-120 %	101	%	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

SPL-GW-MW25-0221
21B0315-11 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/23/2021 11:40
Instrument: NT16 Analyst: PB	Analyzed: 02/26/2021 00:08
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-11 E
	Preparation Batch: BJB0759 Sample Size: 10 mL
	Prepared: 02/25/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.463	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>107</i>	<i>%</i>	



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Reported:
23-Mar-2021 09:52

SPL-GW-MW25-0221
21B0315-11 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sampled: 02/23/2021 11:40
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BJC0200	Analyzed: 03/11/2021 17:46
Sample Preparation:	Prepared: 03/09/2021	Extract ID: 21B0315-11 A 01
	Sample Size: 25 mL	
	Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.400	26.8	mg/L	D
Manganese	7439-96-5	20	0.0100	2.12	mg/L	D



Seattle Public Utilities 700-5th Ave, Ste 4900, Box 34018 Seattle WA, 98124-4018	Project: South Park Landfill -Parametrix Water Project Number: 553-155-067 Project Manager: Jeff Neuner	Reported: 23-Mar-2021 09:52
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SPL-GW-MW25-0221
21B0315-12 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED	Sampled: 02/23/2021 11:40
Instrument: ICPMS1 Analyst: MCB	Analyzed: 02/27/2021 02:04
Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Extract ID: 21B0315-12 A 01
Preparation Batch: BJB0768	Sample Size: 25 mL
Prepared: 02/26/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	0.295	ug/L	



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Reported:
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SPL-GW-MW30-0221
21B0315-13 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Preparation Method: EPA 5030C (Purge and Trap)	Sampled: 02/23/2021 14:10
Instrument: NT2 Analyst: PKC	Preparation Batch: BJC0053	Analyzed: 03/02/2021 17:44
Sample Preparation:	Prepared: 03/02/2021	Extract ID: 21B0315-13 B
	Sample Size: 10 mL	
	Final Volume: 10 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	106	%	



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Reported:
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SPL-GW-MW30-0221
21B0315-13 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/23/2021 14:10
Instrument: NT16 Analyst: PB	Analyzed: 02/26/2021 17:06
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-13 E
	Preparation Batch: BJB0774 Sample Size: 10 mL
	Prepared: 02/26/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>93.8</i>	<i>%</i>	



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Reported:
23-Mar-2021 09:52

SPL-GW-MW30-0221
21B0315-13 (Water)

Metals and Metallic Compounds

Method: EPA 6020B Sampled: 02/23/2021 14:10
Instrument: ICPMS1 Analyst: MCB Analyzed: 03/11/2021 15:25
Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix Extract ID: 21B0315-13 A 01
Preparation Batch: BJC0200 Sample Size: 25 mL
Prepared: 03/09/2021 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	1	0.0200	1.50	mg/L	
Manganese	7439-96-5	1	0.000500	0.0617	mg/L	



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Reported:
23-Mar-2021 09:52

SPL-GW-MW31-0221
21B0315-14 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/23/2021 15:25
Instrument: NT2 Analyst: PKC Analyzed: 03/02/2021 18:05
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-14 B
Preparation Batch: BJC0053 Sample Size: 10 mL
Prepared: 03/02/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	105	%	



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Reported:
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SPL-GW-MW31-0221
21B0315-14 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/23/2021 15:25
Instrument: NT16 Analyst: PB	Analyzed: 03/01/2021 11:15
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-14 J
	Preparation Batch: BJC0017 Sample Size: 10 mL
	Prepared: 03/01/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.167	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>96.7</i>	<i>%</i>	



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Reported:
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SPL-GW-MW31-0221
21B0315-14 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sampled: 02/23/2021 15:25
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BJC0200	Analyzed: 03/12/2021 15:37
Sample Preparation:	Prepared: 03/09/2021	Extract ID: 21B0315-14 A 01
	Sample Size: 25 mL	
	Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	1	0.0200	11.8	mg/L	
Manganese	7439-96-5	20	0.0100	0.537	mg/L	D



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Reported:
23-Mar-2021 09:52

SPL-GW-MW61-0221
21B0315-15 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Preparation Method: EPA 5030C (Purge and Trap)	Sampled: 02/23/2021 15:25
Instrument: NT2 Analyst: PKC	Preparation Batch: BJC0053	Analyzed: 03/02/2021 18:25
Sample Preparation:	Prepared: 03/02/2021	Extract ID: 21B0315-15 C
	Sample Size: 10 mL	
	Final Volume: 10 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>106</i>	<i>%</i>	



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Reported:
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SPL-GW-MW61-0221
21B0315-15 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/23/2021 15:25
Instrument: NT16 Analyst: PB	Analyzed: 02/26/2021 17:26
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0315-15 E
	Preparation Batch: BJB0774 Sample Size: 10 mL
	Prepared: 02/26/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.357	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>110</i>	<i>%</i>	



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Reported:
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SPL-GW-MW61-0221
21B0315-15 (Water)

Metals and Metallic Compounds

Method: EPA 6020B Sampled: 02/23/2021 15:25
Instrument: ICPMS1 Analyst: MCB Analyzed: 03/11/2021 17:27
Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix Extract ID: 21B0315-15 A 01
Preparation Batch: BJC0200 Sample Size: 25 mL
Prepared: 03/09/2021 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	10	0.200	12.3	mg/L	D
Manganese	7439-96-5	20	0.0100	0.513	mg/L	D



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Reported:
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Volatile Organic Compounds - Quality Control

Batch BJC0053 - EPA 5030C (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 (BJC0053-BLK2)		Prepared: 02-Mar-2021 Analyzed: 02-Mar-2021 11:58								
cis-1,2-Dichloroethene	ND	0.20	ug/L							U
Benzene	ND	0.20	ug/L							U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.23		ug/L	5.00		105	80-129			
<i>Surrogate: Toluene-d8</i>	5.02		ug/L	5.00		100	80-120			
LCS (BJC0053-BS2)		Prepared: 02-Mar-2021 Analyzed: 02-Mar-2021 10:54								
cis-1,2-Dichloroethene	10.1	0.20	ug/L	10.0		101	80-121			
Benzene	10.2	0.20	ug/L	10.0		102	80-120			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.05		ug/L	5.00		101	80-129			
<i>Surrogate: Toluene-d8</i>	5.07		ug/L	5.00		101	80-120			
LCS Dup (BJC0053-BSD2)		Prepared: 02-Mar-2021 Analyzed: 02-Mar-2021 11:14								
cis-1,2-Dichloroethene	9.96	0.20	ug/L	10.0		99.6	80-121	1.15	30	
Benzene	10.0	0.20	ug/L	10.0		100	80-120	1.61	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.14		ug/L	5.00	5.44	103	80-129			
<i>Surrogate: Toluene-d8</i>	5.01		ug/L	5.00		100	80-120			
Matrix Spike (BJC0053-MS1)		Source: 21B0315-04		Prepared: 02-Mar-2021 Analyzed: 02-Mar-2021 19:25						
cis-1,2-Dichloroethene	10.3	0.20	ug/L	10.0	ND	103	80-121			
Benzene	10.2	0.20	ug/L	10.0	ND	102	80-120			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.14		ug/L	5.00	5.44	103	80-129			
<i>Surrogate: Toluene-d8</i>	5.06		ug/L	5.00		101	80-120			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike (BJC0053-MS2)		Source: 21B0315-14		Prepared: 02-Mar-2021 Analyzed: 02-Mar-2021 20:06						
cis-1,2-Dichloroethene	10.2	0.20	ug/L	10.0	ND	101	80-121			
Benzene	10.3	0.20	ug/L	10.0	0.05	102	80-120			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.16		ug/L	5.00	5.24	103	80-129			
<i>Surrogate: Toluene-d8</i>	5.07		ug/L	5.00		101	80-120			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BJC0053-MSD1)		Source: 21B0315-04		Prepared: 02-Mar-2021 Analyzed: 02-Mar-2021 19:46						
cis-1,2-Dichloroethene	10.1	0.20	ug/L	10.0	ND	101	80-121	1.55	30	
Benzene	10.1	0.20	ug/L	10.0	ND	101	80-120	1.09	30	



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Reported:
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Volatile Organic Compounds - Quality Control

Batch BJC0053 - EPA 5030C (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
Matrix Spike Dup (BJC0053-MSD1)		Source: 21B0315-04		Prepared: 02-Mar-2021		Analyzed: 02-Mar-2021 19:46				
Surrogate: 1,2-Dichloroethane-d4	5.13		ug/L	5.00	5.44	103	80-129			
Surrogate: Toluene-d8	5.10		ug/L	5.00		102	80-120			

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

Matrix Spike Dup (BJC0053-MSD2)		Source: 21B0315-14		Prepared: 02-Mar-2021		Analyzed: 02-Mar-2021 20:26				
cis-1,2-Dichloroethene	10.2	0.20	ug/L	10.0	ND	101	80-121	0.17	30	
Benzene	10.2	0.20	ug/L	10.0	0.05	102	80-120	0.46	30	
Surrogate: 1,2-Dichloroethane-d4	5.18		ug/L	5.00	5.24	104	80-129			
Surrogate: Toluene-d8	5.07		ug/L	5.00		101	80-120			

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



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Reported:
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Volatile Organic Compounds - SIM - Quality Control

Batch BJB0759 - EPA 5030C (Purge and Trap)

Instrument: NT16 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0759-BLK1)				Prepared: 25-Feb-2021 Analyzed: 25-Feb-2021 17:13						
Vinyl chloride	ND	0.0200	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5240		ug/L	5000		105	80-129			
LCS (BJB0759-BS1)				Prepared: 25-Feb-2021 Analyzed: 25-Feb-2021 16:21						
Vinyl chloride	1.90	0.0200	ug/L	2.00		94.9	62-141			
Surrogate: 1,2-Dichloroethane-d4	5300		ug/L	5000		106	80-129			
LCS Dup (BJB0759-BSD1)				Prepared: 25-Feb-2021 Analyzed: 25-Feb-2021 16:53						
Vinyl chloride	1.71	0.0200	ug/L	2.00		85.4	62-141	10.60	30	
Surrogate: 1,2-Dichloroethane-d4	4970		ug/L	5000		99.3	80-129			
Matrix Spike (BJB0759-MS1)				Source: 21B0315-04		Prepared: 25-Feb-2021 Analyzed: 26-Feb-2021 01:09				
Vinyl chloride	1.53	0.0200	ug/L	2.00	ND	76.4	62-141			
Surrogate: 1,2-Dichloroethane-d4	4670		ug/L	5000	5350	93.4	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BJB0759-MSD1)				Source: 21B0315-04		Prepared: 25-Feb-2021 Analyzed: 26-Feb-2021 01:29				
Vinyl chloride	1.57	0.0200	ug/L	2.00	ND	78.4	62-141	2.50	30	
Surrogate: 1,2-Dichloroethane-d4	4890		ug/L	5000	5350	97.8	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										



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Reported:
23-Mar-2021 09:52

Volatile Organic Compounds - SIM - Quality Control

Batch BJB0774 - EPA 5030C (Purge and Trap)

Instrument: NT16 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0774-BLK1)				Prepared: 26-Feb-2021 Analyzed: 26-Feb-2021 11:04						
Vinyl chloride	ND	0.0200	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5350		ug/L	5000		107	80-129			
LCS (BJB0774-BS1)				Prepared: 26-Feb-2021 Analyzed: 26-Feb-2021 09:58						
Vinyl chloride	1.83	0.0200	ug/L	2.00		91.5	62-141			
Surrogate: 1,2-Dichloroethane-d4	5100		ug/L	5000		102	80-129			
LCS Dup (BJB0774-BSD1)				Prepared: 26-Feb-2021 Analyzed: 26-Feb-2021 10:31						
Vinyl chloride	1.86	0.0200	ug/L	2.00		92.9	62-141	1.57	30	
Surrogate: 1,2-Dichloroethane-d4	4920		ug/L	5000		98.4	80-129			



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Reported:
23-Mar-2021 09:52

Volatile Organic Compounds - SIM - Quality Control

Batch BJC0017 - EPA 5030C (Purge and Trap)

Instrument: NT16 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJC0017-BLK1)				Prepared: 01-Mar-2021 Analyzed: 01-Mar-2021 10:07						
Vinyl chloride	ND	0.0200	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	4370		ug/L	5000		87.3	80-129			
LCS (BJC0017-BS1)				Prepared: 01-Mar-2021 Analyzed: 01-Mar-2021 09:08						
Vinyl chloride	1.86	0.0200	ug/L	2.00		93.2	62-141			
Surrogate: 1,2-Dichloroethane-d4	4470		ug/L	5000		89.4	80-129			
LCS Dup (BJC0017-BSD1)				Prepared: 01-Mar-2021 Analyzed: 01-Mar-2021 09:47						
Vinyl chloride	1.77	0.0200	ug/L	2.00		88.3	62-141	5.46	30	
Surrogate: 1,2-Dichloroethane-d4	4780		ug/L	5000		95.6	80-129			
Matrix Spike (BJC0017-MS1)		Source: 21B0315-14		Prepared: 01-Mar-2021 Analyzed: 01-Mar-2021 11:35						
Vinyl chloride	1.88	0.0200	ug/L	2.00	0.167	85.8	62-141			
Surrogate: 1,2-Dichloroethane-d4	5350		ug/L	5000	4830	107	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BJC0017-MSD1)		Source: 21B0315-14		Prepared: 01-Mar-2021 Analyzed: 01-Mar-2021 11:55						
Vinyl chloride	1.67	0.0200	ug/L	2.00	0.167	74.9	62-141	12.30	30	
Surrogate: 1,2-Dichloroethane-d4	5110		ug/L	5000	4830	102	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										



Seattle Public Utilities
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Reported:
23-Mar-2021 09:52

Metals and Metallic Compounds - Quality Control

Batch BJC0200 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Duplicate (BJC0200-DUP1)			Source: 21B0315-04			Prepared: 09-Mar-2021 Analyzed: 10-Mar-2021 17:30					
Manganese	55	0.592	0.0100	mg/L		0.578			2.29	20	D
Duplicate (BJC0200-DUP2)			Source: 21B0315-14			Prepared: 09-Mar-2021 Analyzed: 10-Mar-2021 18:33					
Manganese	55	0.528	0.0100	mg/L		0.537			1.57	20	D
Duplicate (BJC0200-DUP3)			Source: 21B0315-04			Prepared: 09-Mar-2021 Analyzed: 11-Mar-2021 18:53					
Iron	54	16.8	0.0200	mg/L		17.6			4.61	20	
Manganese	55	0.476	0.000500	mg/L		0.578			19.40	20	
Duplicate (BJC0200-DUP6)			Source: 21B0315-14			Prepared: 09-Mar-2021 Analyzed: 12-Mar-2021 15:40					
Iron	54	12.0	0.0200	mg/L		11.8			1.87	20	
Matrix Spike (BJC0200-MS1)			Source: 21B0315-04			Prepared: 09-Mar-2021 Analyzed: 10-Mar-2021 17:35					
Manganese	55	0.610	0.0100	mg/L	0.0250	0.578	127	75-125			HC, D
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike (BJC0200-MS2)			Source: 21B0315-14			Prepared: 09-Mar-2021 Analyzed: 10-Mar-2021 18:38					
Manganese	55	0.558	0.0100	mg/L	0.0250	0.537	85.4	75-125			HC, D
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike (BJC0200-MS3)			Source: 21B0315-04			Prepared: 09-Mar-2021 Analyzed: 11-Mar-2021 18:58					
Iron	54	20.7	0.0200	mg/L	5.00	17.6	62.6	75-125			
Manganese	55	0.492	0.000500	mg/L	0.0250	0.578	-347	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike (BJC0200-MS6)			Source: 21B0315-14			Prepared: 09-Mar-2021 Analyzed: 12-Mar-2021 15:43					
Iron	54	16.1	0.0200	mg/L	5.00	11.8	86.0	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike Dup (BJC0200-MSD1)			Source: 21B0315-04			Prepared: 09-Mar-2021 Analyzed: 10-Mar-2021 17:41					
Manganese	55	0.539	0.0100	mg/L	0.0250	0.578	-159	75-125	12.40	20	HC, D
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike Dup (BJC0200-MSD2)			Source: 21B0315-14			Prepared: 09-Mar-2021 Analyzed: 10-Mar-2021 18:44					
Manganese	55	0.623	0.0100	mg/L	0.0250	0.537	345	75-125	11.00	20	HC, D
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											



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Metals and Metallic Compounds - Quality Control

Batch BJC0200 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BJC0200-MSD5)			Source: 21B0315-04			Prepared: 09-Mar-2021 Analyzed: 12-Mar-2021 15:50					
Iron	54	22.4	0.0200	mg/L	5.00	17.6	95.1	75-125	7.56	20	

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

Matrix Spike Dup (BJC0200-MSD6)			Source: 21B0315-14			Prepared: 09-Mar-2021 Analyzed: 12-Mar-2021 15:46					
Iron	54	16.2	0.0200	mg/L	5.00	11.8	87.7	75-125	0.55	20	

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



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Metals and Metallic Compounds (dissolved) - Quality Control

Batch BJB0768 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0768-BLK1)						Prepared: 26-Feb-2021 Analyzed: 26-Feb-2021 15:57					
Arsenic, Dissolved	75a	ND	0.200	ug/L							U
LCS (BJB0768-BS1)						Prepared: 26-Feb-2021 Analyzed: 26-Feb-2021 15:52					
Arsenic, Dissolved	75a	24.6	0.200	ug/L	25.0		98.4	80-120			



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Certified Analyses included in this Report

Analyte	Certifications
EPA 6020B in Water	
Iron-54	NELAP,WADOE,DoD-ELAP
Iron-54	NELAP,WADOE,DoD-ELAP
Iron-54	NELAP,DoD-ELAP
Iron-54	WADOE,DoD-ELAP
Iron-57	NELAP,WADOE,DoD-ELAP
Iron-57	NELAP,DoD-ELAP
Iron-57	WADOE,DoD-ELAP
Iron-57	NELAP,WADOE,DoD-ELAP
Manganese-55	NELAP,WADOE,DoD-ELAP
Manganese-55	NELAP,DoD-ELAP
Manganese-55	WADOE,DoD-ELAP
Manganese-55	NELAP,WADOE,DoD-ELAP
EPA 6020B UCT-KED in Water	
Arsenic-75a	WADOE,DoD-ELAP,ADEC
Arsenic-75a	NELAP,WADOE,DoD-ELAP,ADEC
Arsenic-75a	NELAP,DoD-ELAP,ADEC
Arsenic-75a	NELAP,WADOE,DoD-ELAP,ADEC
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Vinyl Chloride	DoD-ELAP,ADEC,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP
Chloroethane	DoD-ELAP,ADEC,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE



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Trichlorofluoromethane	DoD-ELAP,ADEC,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
Acrolein	DoD-ELAP,CALAP,WADOE
Acrolein	DoD-ELAP,NELAP,CALAP
Acrolein	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP
1,1-Dichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,CALAP
Iodomethane	DoD-ELAP,NELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP
Acrylonitrile	DoD-ELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP
Carbon Disulfide	DoD-ELAP,NELAP,CALAP
Carbon Disulfide	DoD-ELAP,CALAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,CALAP,WADOE



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trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,CALAP
Vinyl Acetate	DoD-ELAP,NELAP,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
2-Butanone	DoD-ELAP,CALAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,CALAP
2-Butanone	DoD-ELAP,NELAP,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
2,2-Dichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Bromochloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP
1,1-Dichloropropene	DoD-ELAP,ADEC,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE



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Carbon tetrachloride	DoD-ELAP,ADEC,CALAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,2-Dichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Bromodichloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,CALAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE



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Toluene	DoD-ELAP,ADEC,NELAP,CALAP
Toluene	DoD-ELAP,ADEC,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,CALAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,2-Trichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Dibromochloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,CALAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP



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1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP
m,p-Xylene	DoD-ELAP,ADEC,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP
o-Xylene	DoD-ELAP,ADEC,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Styrene	DoD-ELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,CALAP
Styrene	DoD-ELAP,NELAP,CALAP,WADOE
Bromoform	DoD-ELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,CALAP
Bromoform	DoD-ELAP,NELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,2,3-Trichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,CALAP
n-Propylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,CALAP,WADOE



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Bromobenzene	DoD-ELAP,NELAP,CALAP
Isopropyl Benzene	DoD-ELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,CALAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP
4-Chlorotoluene	DoD-ELAP,ADEC,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP
1,3,5-Trimethylbenzene	DoD-ELAP,CALAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,CALAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,CALAP
s-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP
4-Isopropyl Toluene	DoD-ELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE



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

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 09:52

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



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Reported:
23-Mar-2021 09:52

n-Hexane	
n-Hexane	WADOE
n-Hexane	WADOE
2-Pentanone	WADOE
2-Pentanone	
2-Pentanone	WADOE
2-Pentanone	WADOE

EPA 8260D-SIM in Water

Acrylonitrile	NELAP,CALAP
Acrylonitrile	NELAP,WADOE
Acrylonitrile	NELAP,CALAP,WADOE
Acrylonitrile	CALAP,WADOE
Vinyl chloride	CALAP,WADOE
Vinyl chloride	NELAP,CALAP
Vinyl chloride	NELAP,WADOE
Vinyl chloride	NELAP,CALAP,WADOE
1,1-Dichloroethene	NELAP,CALAP,WADOE
1,1-Dichloroethene	NELAP,WADOE
1,1-Dichloroethene	CALAP,WADOE
1,1-Dichloroethene	NELAP,CALAP
cis-1,2-Dichloroethene	NELAP,CALAP,WADOE
cis-1,2-Dichloroethene	NELAP,WADOE
cis-1,2-Dichloroethene	CALAP,WADOE
cis-1,2-Dichloroethene	NELAP,CALAP
trans-1,2-Dichloroethene	CALAP,WADOE
trans-1,2-Dichloroethene	NELAP,CALAP
trans-1,2-Dichloroethene	NELAP,WADOE
trans-1,2-Dichloroethene	NELAP,CALAP,WADOE
Trichloroethene	CALAP,WADOE
Trichloroethene	NELAP,CALAP
Trichloroethene	NELAP,CALAP,WADOE
Trichloroethene	NELAP,WADOE
Tetrachloroethene	NELAP,CALAP,WADOE
Tetrachloroethene	NELAP,WADOE
Tetrachloroethene	CALAP,WADOE
Tetrachloroethene	NELAP,CALAP
1,1,2,2-Tetrachloroethane	NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	NELAP,CALAP
1,1,2,2-Tetrachloroethane	CALAP,WADOE



Seattle Public Utilities
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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water

Project Number: 553-155-067

Project Manager: Jeff Neuner

Reported:

23-Mar-2021 09:52

1,1,2,2-Tetrachloroethane	NELAP,WADOE
1,2-Dichloroethane	NELAP,CALAP
1,2-Dichloroethane	CALAP,WADOE
1,2-Dichloroethane	NELAP,WADOE
1,2-Dichloroethane	NELAP,CALAP,WADOE
Benzene	NELAP,CALAP,WADOE
Benzene	NELAP,CALAP
Benzene	CALAP,WADOE
Benzene	NELAP,WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022



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Reported:
23-Mar-2021 09:52

Notes and Definitions

- * Flagged value is not within established control limits.
- 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)
- HC The natural concentration of the spiked analyte is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- J Estimated concentration value detected below the reporting limit.
- U This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
- 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.



23 March 2021

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

RE: South Park Landfill -Parametrix Water

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.

<u>Associated Work Order(s)</u>	<u>Associated SDG ID(s)</u>
21B0328	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 its entirety.



Chain of Custody Record & Laboratory Analysis Request



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

ARI Assigned Number: <i>21B0328</i>	Turn-around Requested: <i>2 Weeks</i>	Page: <i>1</i> of <i>1</i>
ARI Client Company: <i>Seattle Public Utility Jeff Neenan</i>	Phone: <i>206-684-7693</i>	Date: <i>2/24/21</i> Ice Present? <i>Yes</i>
Client Contact: <i>Laura Lee, Parametrix</i>	No. of Coolers: <i>1</i>	Cooler Temps: <i>1.6</i>

Client Project Name: <i>South Park Landfill</i>	Analysis Requested					Notes/Comments
Client Project #: <i>553-1550-067</i>	Samplers: <i>Trey Perry</i>	<i>Cis-1,2-DCE</i>	<i>Cis-1,2-DCE benzene</i>	<i>Vinyl Chloride</i>	<i>Total Fe, Mn</i>	<i>Dissolved As³⁺</i>

Sample ID	Date	Time	Matrix	No. Containers	<i>Cis-1,2-DCE</i>	<i>Cis-1,2-DCE benzene</i>	<i>Vinyl Chloride</i>	<i>Total Fe, Mn</i>	<i>Dissolved As³⁺</i>				<i>** Field Filtered *</i>
<i>SPL-GW-MW24-0221</i>	<i>2/24</i>	<i>12:20</i>	<i>Water</i>	<i>8</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>				
<i>SPL-GW-MW26-0221</i>	<i>↓</i>	<i>13:50</i>	<i>↓</i>	<i>8</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>				
<i>SPL-GW-MW08-0221</i>	<i>↓</i>	<i>09:15</i>	<i>↓</i>	<i>8</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>				
<i>SPL-GW-MW27-0221</i>	<i>↓</i>	<i>11:00</i>	<i>↓</i>	<i>8</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>				
<i>SPL-GW-MW32-0221</i>	<i>2/23</i>	<i>14:10</i>	<i>↓</i>	<i>8</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>				
<i>SPL-GW-MW33-0221</i>	<i>2/24</i>	<i>15:55</i>	<i>↓</i>	<i>8</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>				
<i>SPL-GW-MW81-0221</i>	<i>2/24</i>	<i>8:00</i>	<i>Water</i>	<i>2</i>		<i>X</i>	<i>X</i>						

Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: <i>Trey Perry</i>	Printed Name: <i>Jacob Waite</i>	Printed Name:	Printed Name:
	Company: <i>Parametrix</i>	Company: <i>ARI</i>	Company:	Company:
	Date & Time: <i>2/24/21 16:55</i>	Date & Time: <i>02/24/2021 16:55</i>	Date & Time:	Date & Time:

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, notwithstanding 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
700-5th Ave, Ste 4900, Box 34018
Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water
Project Number: 553-1550-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 10:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SPL-GW-MW24-0221	21B0328-01	Water	24-Feb-2021 12:20	24-Feb-2021 16:55
SPL-GW-MW24-0221	21B0328-02	Water	24-Feb-2021 12:20	24-Feb-2021 16:55
SPL-GW-MW26-0221	21B0328-03	Water	24-Feb-2021 13:50	24-Feb-2021 16:55
SPL-GW-MW26-0221	21B0328-04	Water	24-Feb-2021 13:50	24-Feb-2021 16:55
SPL-GW-MW08-0221	21B0328-05	Water	24-Feb-2021 09:15	24-Feb-2021 16:55
SPL-GW-MW08-0221	21B0328-06	Water	24-Feb-2021 09:15	24-Feb-2021 16:55
SPL-GW-MW27-0221	21B0328-07	Water	24-Feb-2021 11:00	24-Feb-2021 16:55
SPL-GW-MW27-0221	21B0328-08	Water	24-Feb-2021 11:00	24-Feb-2021 16:55
SPL-GW-MW32-0221	21B0328-09	Water	23-Feb-2021 14:10	24-Feb-2021 16:55
SPL-GW-MW32-0221	21B0328-10	Water	23-Feb-2021 14:10	24-Feb-2021 16:55
SPL-GW-MW33-0221	21B0328-11	Water	24-Feb-2021 15:55	24-Feb-2021 16:55
SPL-GW-MW33-0221	21B0328-12	Water	24-Feb-2021 15:55	24-Feb-2021 16:55
SPL-GW-MW81-0221	21B0328-13	Water	24-Feb-2021 08:00	24-Feb-2021 16:55



Seattle Public Utilities
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Seattle WA, 98124-4018

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Project Number: 553-1550-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 10:35

Work Order Case Narrative

Client: Seattle Public Utilities
Project: South Park Landfill -Parametrix Water
Work Order: 21B0328

Revised Report - March 23, 2021

This report was revised to change reporting units for Dissolved Arsenic from mg/L to μ /L.

Sample receipt

Samples as listed on the preceding page were received 24-Feb-2021 16:55 under ARI work order 21B0328. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles - EPA Method SW8260D

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.

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

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Volatiles - EPA Method 8260D-SIM (Selected Ion Monitoring)

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.

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

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.



Seattle Public Utilities
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Project Number: 553-1550-067
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Reported:
23-Mar-2021 10:35

Total Metals - EPA Method 6020B

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 blank spike (BS/LCS) percent recoveries were within control limits.



WORK ORDER

21B0328

Client: Seattle Public Utilities	Project Manager: Shelly Fishel
Project: South Park Landfill -Parametrix Water	Project Number: 553-1550-067

Preservation Confirmation

Container ID	Container Type	pH	
21B0328-01 A	HDPE NM, 500 mL, 1:1 HNO3	< 2	Pass
21B0328-01 B	VOA Vial, Clear, 40 mL		
21B0328-01 C	VOA Vial, Clear, 40 mL		
21B0328-01 D	VOA Vial, Clear, 40 mL		
21B0328-01 E	VOA Vial, Clear, 40 mL, HCL		
21B0328-01 F	VOA Vial, Clear, 40 mL, HCL		
21B0328-01 G	VOA Vial, Clear, 40 mL, HCL		
21B0328-02 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	< 2	Pass
21B0328-03 A	HDPE NM, 500 mL, 1:1 HNO3	< 2	Pass
21B0328-03 B	VOA Vial, Clear, 40 mL		
21B0328-03 C	VOA Vial, Clear, 40 mL		
21B0328-03 D	VOA Vial, Clear, 40 mL		
21B0328-03 E	VOA Vial, Clear, 40 mL, HCL		
21B0328-03 F	VOA Vial, Clear, 40 mL, HCL		
21B0328-03 G	VOA Vial, Clear, 40 mL, HCL		
21B0328-04 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	< 2	Pass
21B0328-05 A	HDPE NM, 500 mL, 1:1 HNO3	< 2	Pass
21B0328-05 B	VOA Vial, Clear, 40 mL		
21B0328-05 C	VOA Vial, Clear, 40 mL		
21B0328-05 D	VOA Vial, Clear, 40 mL		
21B0328-05 E	VOA Vial, Clear, 40 mL, HCL		
21B0328-05 F	VOA Vial, Clear, 40 mL, HCL		
21B0328-05 G	VOA Vial, Clear, 40 mL, HCL		
21B0328-06 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	< 2	Pass
21B0328-07 A	HDPE NM, 500 mL, 1:1 HNO3	< 2	Pass
21B0328-07 B	VOA Vial, Clear, 40 mL		
21B0328-07 C	VOA Vial, Clear, 40 mL		
21B0328-07 D	VOA Vial, Clear, 40 mL		
21B0328-07 E	VOA Vial, Clear, 40 mL, HCL		
21B0328-07 F	VOA Vial, Clear, 40 mL, HCL		
21B0328-07 G	VOA Vial, Clear, 40 mL, HCL		
21B0328-08 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	< 2	Pass
21B0328-09 A	HDPE NM, 500 mL, 1:1 HNO3	< 2	Pass
21B0328-09 B	VOA Vial, Clear, 40 mL		
21B0328-09 C	VOA Vial, Clear, 40 mL		



WORK ORDER

21B0328

Client: Seattle Public Utilities	Project Manager: Shelly Fishel
Project: South Park Landfill -Parametrix Water	Project Number: 553-1550-067

21B0328-09 D	VOA Vial, Clear, 40 mL		
21B0328-09 E	VOA Vial, Clear, 40 mL, HCL		
21B0328-09 F	VOA Vial, Clear, 40 mL, HCL		
21B0328-09 G	VOA Vial, Clear, 40 mL, HCL		
21B0328-10 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2	Pass
21B0328-11 A	HDPE NM, 500 mL, 1:1 HNO3	<2	Pass
21B0328-11 B	VOA Vial, Clear, 40 mL		
21B0328-11 C	VOA Vial, Clear, 40 mL		
21B0328-11 D	VOA Vial, Clear, 40 mL		
21B0328-11 E	VOA Vial, Clear, 40 mL, HCL		
21B0328-11 F	VOA Vial, Clear, 40 mL, HCL		
21B0328-11 G	VOA Vial, Clear, 40 mL, HCL		
21B0328-12 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2	Pass
21B0328-13 A	VOA Vial, Clear, 40 mL		
21B0328-13 B	VOA Vial, Clear, 40 mL, HCL		
21B0328-14 A	VOA Vial, Clear, 40 mL, HCL		
21B0328-14 B	VOA Vial, Clear, 40 mL, HCL		

J3u
Preservation Confirmed By

02/25/2021
Date



Cooler Receipt Form

ARI Client: SPU/Parametrix

Project Name: South Park Landfill

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 2150308

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 1655 1.6

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: DOO 5206

Cooler Accepted by: JJ Date: 02/25/2001 Time: 1655

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? 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? YES NO

Date VOC Trip Blank was made at ARI: NA 02/25/2001

Were the sample(s) split by ARI? YES NO Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JJ Date: 02/25/2001 Time: 1042 Labels checked by: JJ

**** 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:

Trip Blanks are not annotated on the Col. logged as the final sample in the work order.

By: JJ Date: 02/25/2001



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

Project: South Park Landfill -Parametrix Water
Project Number: 553-1550-067
Project Manager: Jeff Neuner

Reported:
23-Mar-2021 10:35

SPL-GW-MW24-0221
21B0328-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/24/2021 12:20
Instrument: NT2 Analyst: PKC Analyzed: 03/05/2021 13:34
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-01 E
Preparation Batch: BJC0144 Sample Size: 10 mL
Prepared: 03/04/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>108</i>	<i>%</i>	



Seattle Public Utilities
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SPL-GW-MW24-0221
21B0328-01 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM Sampled: 02/24/2021 12:20
Instrument: NT16 Analyst: PB Analyzed: 03/01/2021 14:39

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-01 B
Preparation Batch: BJC0017 Sample Size: 10 mL
Prepared: 03/01/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0226	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>95.0</i>	<i>%</i>	



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SPL-GW-MW24-0221
21B0328-01 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 02/24/2021 12:20

Instrument: ICPMS1 Analyst: MCB

Analyzed: 03/11/2021 17:56

Sample Preparation:

Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Extract ID: 21B0328-01 A 01

Preparation Batch: BJC0127

Sample Size: 25 mL

Prepared: 03/05/2021

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.400	25.5	mg/L	D
Manganese	7439-96-5	20	0.0100	1.48	mg/L	D



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SPL-GW-MW24-0221
21B0328-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED	Sampled: 02/24/2021 12:20
Instrument: ICPMS1 Analyst: MCB	Analyzed: 02/27/2021 02:10
Sample Preparation:	Extract ID: 21B0328-02 A 01
Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	
Preparation Batch: BJB0768	Sample Size: 25 mL
Prepared: 02/26/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	ND	ug/L	U



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SPL-GW-MW26-0221
21B0328-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Preparation Method: EPA 5030C (Purge and Trap)	Sampled: 02/24/2021 13:50
Instrument: NT2 Analyst: PKC	Preparation Batch: BJC0144	Analyzed: 03/05/2021 13:54
Sample Preparation:	Prepared: 03/04/2021	Extract ID: 21B0328-03 E
	Sample Size: 10 mL	
	Final Volume: 10 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.65	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	107	%	



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SPL-GW-MW26-0221
21B0328-03 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM	Sampled: 02/24/2021 13:50
Instrument: NT16 Analyst: PB	Analyzed: 03/01/2021 14:59
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-03 B
	Preparation Batch: BJC0017 Sample Size: 10 mL
	Prepared: 03/01/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0620	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>98.4</i>	<i>%</i>	



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SPL-GW-MW26-0221
21B0328-03 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sampled: 02/24/2021 13:50
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BJC0127	Analyzed: 03/11/2021 18:37
Sample Preparation:	Prepared: 03/05/2021	Extract ID: 21B0328-03 A 01
	Sample Size: 25 mL	
	Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	1	0.0200	5.81	mg/L	
Manganese	7439-96-5	1	0.000500	0.0777	mg/L	



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SPL-GW-MW26-0221
21B0328-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED	Sampled: 02/24/2021 13:50
Instrument: ICPMS1 Analyst: MCB	Analyzed: 02/27/2021 02:35
Sample Preparation:	Extract ID: 21B0328-04 A 01
Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	
Preparation Batch: BJB0768	Sample Size: 25 mL
Prepared: 02/26/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	0.712	ug/L	



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SPL-GW-MW08-0221
21B0328-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Preparation Method: EPA 5030C (Purge and Trap)	Sampled: 02/24/2021 09:15
Instrument: NT2 Analyst: PKC	Preparation Batch: BJC0144	Analyzed: 03/05/2021 14:15
Sample Preparation:	Prepared: 03/04/2021	Extract ID: 21B0328-05 E
	Sample Size: 10 mL	
	Final Volume: 10 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	110	%	



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SPL-GW-MW08-0221
21B0328-05 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM Sampled: 02/24/2021 09:15
Instrument: NT16 Analyst: PB Analyzed: 03/01/2021 15:19

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-05 B
Preparation Batch: BJC0017 Sample Size: 10 mL
Prepared: 03/01/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0735	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>106</i>	<i>%</i>	



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SPL-GW-MW08-0221
21B0328-05 (Water)

Metals and Metallic Compounds

Method: EPA 6020B		Sampled: 02/24/2021 09:15
Instrument: ICPMS1 Analyst: MCB		Analyzed: 03/11/2021 18:24
Sample Preparation:	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Extract ID: 21B0328-05 A 01
	Preparation Batch: BJC0127	Sample Size: 25 mL
	Prepared: 03/05/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	10	0.200	14.6	mg/L	D
Manganese	7439-96-5	20	0.0100	1.09	mg/L	D



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SPL-GW-MW08-0221
21B0328-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED	Sampled: 02/24/2021 09:15
Instrument: ICPMS1 Analyst: MCB	Analyzed: 02/27/2021 02:40
Sample Preparation:	Extract ID: 21B0328-06 A 01
Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	
Preparation Batch: BJB0768	Sample Size: 25 mL
Prepared: 02/26/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	ND	ug/L	U



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SPL-GW-MW27-0221
21B0328-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Preparation Method: EPA 5030C (Purge and Trap)	Sampled: 02/24/2021 11:00
Instrument: NT2 Analyst: PKC	Preparation Batch: BJC0144	Analyzed: 03/05/2021 14:35
Sample Preparation:	Prepared: 03/04/2021	Extract ID: 21B0328-07 E
	Sample Size: 10 mL	
	Final Volume: 10 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>106</i>	<i>%</i>	



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SPL-GW-MW27-0221
21B0328-07 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM Sampled: 02/24/2021 11:00
Instrument: NT16 Analyst: PB Analyzed: 03/01/2021 15:40
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-07 B
Preparation Batch: BJC0017 Sample Size: 10 mL
Prepared: 03/01/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>104</i>	<i>%</i>	



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SPL-GW-MW27-0221
21B0328-07 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sampled: 02/24/2021 11:00
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BJC0127	Analyzed: 03/11/2021 18:42
Sample Preparation:	Prepared: 03/05/2021	Extract ID: 21B0328-07 A 01
	Sample Size: 25 mL	
	Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	1	0.0200	1.86	mg/L	
Manganese	7439-96-5	1	0.000500	0.125	mg/L	



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SPL-GW-MW27-0221
21B0328-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED	Sampled: 02/24/2021 11:00
Instrument: ICPMS1 Analyst: MCB	Analyzed: 02/27/2021 02:44
Sample Preparation:	Extract ID: 21B0328-08 A 01
Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	
Preparation Batch: BJB0768	Sample Size: 25 mL
Prepared: 02/26/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	0.823	ug/L	



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SPL-GW-MW32-0221
21B0328-09 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Preparation Method: EPA 5030C (Purge and Trap)	Sampled: 02/23/2021 14:10
Instrument: NT2 Analyst: PKC	Preparation Batch: BJC0144	Analyzed: 03/05/2021 14:55
Sample Preparation:	Prepared: 03/04/2021	Extract ID: 21B0328-09 E
	Sample Size: 10 mL	
	Final Volume: 10 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.87	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	109	%	



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SPL-GW-MW32-0221
21B0328-09 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM Sampled: 02/23/2021 14:10
Instrument: NT16 Analyst: PB Analyzed: 03/01/2021 16:00

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-09 B
Preparation Batch: BJC0017 Sample Size: 10 mL
Prepared: 03/01/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.162	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>100</i>	<i>%</i>	



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SPL-GW-MW32-0221
21B0328-09 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sampled: 02/23/2021 14:10
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BJC0127	Analyzed: 03/11/2021 18:28
Sample Preparation:	Prepared: 03/05/2021	Extract ID: 21B0328-09 A 01
	Sample Size: 25 mL	
	Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	10	0.200	11.2	mg/L	D
Manganese	7439-96-5	20	0.0100	1.37	mg/L	D



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SPL-GW-MW32-0221
21B0328-10 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED Sampled: 02/23/2021 14:10
Instrument: ICPMS1 Analyst: MCB Analyzed: 02/27/2021 02:49
Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix Extract ID: 21B0328-10 A 01
Preparation Batch: BJB0768 Sample Size: 25 mL
Prepared: 02/26/2021 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	1.16	ug/L	



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SPL-GW-MW33-0221
21B0328-11 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/24/2021 15:55
Instrument: NT2 Analyst: PKC Analyzed: 03/05/2021 15:16
Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-11 E
Preparation Batch: BJC0144 Sample Size: 10 mL
Prepared: 03/04/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	108	%	



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SPL-GW-MW33-0221
21B0328-11 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM Sampled: 02/24/2021 15:55
Instrument: NT16 Analyst: PB Analyzed: 03/01/2021 16:20

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-11 B
Preparation Batch: BJC0017 Sample Size: 10 mL
Prepared: 03/01/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.114	ug/L	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>93.6</i>	<i>%</i>	



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SPL-GW-MW33-0221
21B0328-11 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sampled: 02/24/2021 15:55
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BJC0127	Analyzed: 03/11/2021 18:33
Sample Preparation:	Prepared: 03/05/2021	Extract ID: 21B0328-11 A 01
	Sample Size: 25 mL	
	Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	10	0.200	15.6	mg/L	D
Manganese	7439-96-5	20	0.0100	1.55	mg/L	D



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SPL-GW-MW33-0221
21B0328-12 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6020B UCT-KED	Sampled: 02/24/2021 15:55
Instrument: ICPMS1 Analyst: MCB	Analyzed: 02/27/2021 02:55
Sample Preparation:	Extract ID: 21B0328-12 A 01
Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix	
Preparation Batch: BJB0768	Sample Size: 25 mL
Prepared: 02/26/2021	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	0.845	ug/L	



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SPL-GW-MW81-0221
21B0328-13 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 02/24/2021 08:00
Instrument: NT2 Analyst: PKC Analyzed: 03/05/2021 15:36

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-13 B
Preparation Batch: BJC0144 Sample Size: 10 mL
Prepared: 03/04/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			80-129 %	106	%	
<i>Surrogate: Toluene-d8</i>			80-120 %	100	%	



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SPL-GW-MW81-0221
21B0328-13 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM Sampled: 02/24/2021 08:00
Instrument: NT16 Analyst: PB Analyzed: 03/01/2021 12:16

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 21B0328-13 A
Preparation Batch: BJC0017 Sample Size: 10 mL
Prepared: 03/01/2021 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>93.4</i>	<i>%</i>	



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Project Number: 553-1550-067
Project Manager: Jeff Neuner

Reported:
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Volatile Organic Compounds - Quality Control

Batch BJC0144 - EPA 5030C (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 (BJC0144-BLK2)		Prepared: 05-Mar-2021 Analyzed: 05-Mar-2021 12:12								
cis-1,2-Dichloroethene	ND	0.20	ug/L							U
Benzene	ND	0.20	ug/L							U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.21		ug/L	5.00		104	80-129			
<i>Surrogate: Toluene-d8</i>	4.93		ug/L	5.00		98.6	80-120			
LCS (BJC0144-BS2)		Prepared: 05-Mar-2021 Analyzed: 05-Mar-2021 11:09								
cis-1,2-Dichloroethene	10.1	0.20	ug/L	10.0		101	80-121			
Benzene	10.3	0.20	ug/L	10.0		103	80-120			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.11		ug/L	5.00		102	80-129			
<i>Surrogate: Toluene-d8</i>	5.01		ug/L	5.00		100	80-120			
LCS Dup (BJC0144-BSD2)		Prepared: 05-Mar-2021 Analyzed: 05-Mar-2021 11:29								
cis-1,2-Dichloroethene	9.86	0.20	ug/L	10.0		98.6	80-121	2.45	30	
Benzene	9.98	0.20	ug/L	10.0		99.8	80-120	3.44	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.24		ug/L	5.00		105	80-129			
<i>Surrogate: Toluene-d8</i>	5.02		ug/L	5.00		100	80-120			



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Reported:
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Volatile Organic Compounds - SIM - Quality Control

Batch BJC0017 - EPA 5030C (Purge and Trap)

Instrument: NT16 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJC0017-BLK1)				Prepared: 01-Mar-2021 Analyzed: 01-Mar-2021 10:07						
Vinyl chloride	ND	0.0200	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	4370		ug/L	5000		87.3	80-129			
LCS (BJC0017-BS1)				Prepared: 01-Mar-2021 Analyzed: 01-Mar-2021 09:08						
Vinyl chloride	1.86	0.0200	ug/L	2.00		93.2	62-141			
Surrogate: 1,2-Dichloroethane-d4	4470		ug/L	5000		89.4	80-129			
LCS Dup (BJC0017-BSD1)				Prepared: 01-Mar-2021 Analyzed: 01-Mar-2021 09:47						
Vinyl chloride	1.77	0.0200	ug/L	2.00		88.3	62-141	5.46	30	
Surrogate: 1,2-Dichloroethane-d4	4780		ug/L	5000		95.6	80-129			



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Metals and Metallic Compounds - Quality Control

Batch BJC0127 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJC0127-BLK3)			Prepared: 04-Mar-2021 Analyzed: 09-Mar-2021 19:11								
Iron	54	ND	0.0200	mg/L							U
Iron	57	ND	0.0200	mg/L							U
Manganese	55	ND	0.000500	mg/L							U
LCS (BJC0127-BS3)			Prepared: 04-Mar-2021 Analyzed: 09-Mar-2021 19:15								
Iron	54	5.26	0.0200	mg/L	5.00		105	80-120			
Iron	57	5.11	0.0200	mg/L	5.00		102	80-120			
Manganese	55	0.0282	0.000500	mg/L	0.0250		113	80-120			



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Metals and Metallic Compounds (dissolved) - Quality Control

Batch BJB0768 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJB0768-BLK1)						Prepared: 26-Feb-2021 Analyzed: 26-Feb-2021 15:57					
Arsenic, Dissolved	75a	ND	0.200	ug/L							U
LCS (BJB0768-BS1)						Prepared: 26-Feb-2021 Analyzed: 26-Feb-2021 15:52					
Arsenic, Dissolved	75a	24.6	0.200	ug/L	25.0		98.4	80-120			



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Certified Analyses included in this Report

Analyte	Certifications
EPA 6020B in Water	
Iron-54	NELAP,WADOE,DoD-ELAP
Iron-54	NELAP,WADOE,DoD-ELAP
Iron-54	NELAP,DoD-ELAP
Iron-54	WADOE,DoD-ELAP
Iron-57	NELAP,WADOE,DoD-ELAP
Iron-57	NELAP,DoD-ELAP
Iron-57	WADOE,DoD-ELAP
Iron-57	NELAP,WADOE,DoD-ELAP
Manganese-55	NELAP,WADOE,DoD-ELAP
Manganese-55	NELAP,DoD-ELAP
Manganese-55	WADOE,DoD-ELAP
Manganese-55	NELAP,WADOE,DoD-ELAP
EPA 6020B UCT-KED in Water	
Arsenic-75a	WADOE,DoD-ELAP,ADEC
Arsenic-75a	NELAP,WADOE,DoD-ELAP,ADEC
Arsenic-75a	NELAP,DoD-ELAP,ADEC
Arsenic-75a	NELAP,WADOE,DoD-ELAP,ADEC
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Vinyl Chloride	DoD-ELAP,ADEC,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP
Chloroethane	DoD-ELAP,ADEC,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE



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Trichlorofluoromethane	DoD-ELAP,ADEC,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
Acrolein	DoD-ELAP,CALAP,WADOE
Acrolein	DoD-ELAP,NELAP,CALAP
Acrolein	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP
1,1-Dichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,CALAP
Iodomethane	DoD-ELAP,NELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP
Acrylonitrile	DoD-ELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP
Carbon Disulfide	DoD-ELAP,NELAP,CALAP
Carbon Disulfide	DoD-ELAP,CALAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,CALAP,WADOE



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trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,CALAP
Vinyl Acetate	DoD-ELAP,NELAP,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
2-Butanone	DoD-ELAP,CALAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,CALAP
2-Butanone	DoD-ELAP,NELAP,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
2,2-Dichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Bromochloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP
1,1-Dichloropropene	DoD-ELAP,ADEC,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE



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Carbon tetrachloride	DoD-ELAP,ADEC,CALAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,2-Dichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Bromodichloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,CALAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE



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Toluene	DoD-ELAP,ADEC,NELAP,CALAP
Toluene	DoD-ELAP,ADEC,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,CALAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,2-Trichloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP
Dibromochloromethane	DoD-ELAP,ADEC,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,CALAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP



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1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP
m,p-Xylene	DoD-ELAP,ADEC,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP
o-Xylene	DoD-ELAP,ADEC,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Styrene	DoD-ELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,CALAP
Styrene	DoD-ELAP,NELAP,CALAP,WADOE
Bromoform	DoD-ELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,CALAP
Bromoform	DoD-ELAP,NELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP
1,2,3-Trichloropropane	DoD-ELAP,ADEC,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,CALAP
n-Propylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,CALAP,WADOE



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Bromobenzene	DoD-ELAP,NELAP,CALAP
Isopropyl Benzene	DoD-ELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,CALAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP
4-Chlorotoluene	DoD-ELAP,ADEC,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP
1,3,5-Trimethylbenzene	DoD-ELAP,CALAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,CALAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,CALAP
s-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP
4-Isopropyl Toluene	DoD-ELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,CALAP,WADOE



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

Project: South Park Landfill -Parametrix Water

Project Number: 553-1550-067

Project Manager: Jeff Neuner

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



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n-Hexane	
n-Hexane	WADOE
n-Hexane	WADOE
2-Pentanone	WADOE
2-Pentanone	
2-Pentanone	WADOE
2-Pentanone	WADOE

EPA 8260D-SIM in Water

Acrylonitrile	NELAP,CALAP
Acrylonitrile	NELAP,WADOE
Acrylonitrile	NELAP,CALAP,WADOE
Acrylonitrile	CALAP,WADOE
Vinyl chloride	CALAP,WADOE
Vinyl chloride	NELAP,CALAP
Vinyl chloride	NELAP,WADOE
Vinyl chloride	NELAP,CALAP,WADOE
1,1-Dichloroethene	NELAP,CALAP,WADOE
1,1-Dichloroethene	NELAP,WADOE
1,1-Dichloroethene	CALAP,WADOE
1,1-Dichloroethene	NELAP,CALAP
cis-1,2-Dichloroethene	NELAP,CALAP,WADOE
cis-1,2-Dichloroethene	NELAP,WADOE
cis-1,2-Dichloroethene	CALAP,WADOE
cis-1,2-Dichloroethene	NELAP,CALAP
trans-1,2-Dichloroethene	CALAP,WADOE
trans-1,2-Dichloroethene	NELAP,CALAP
trans-1,2-Dichloroethene	NELAP,WADOE
trans-1,2-Dichloroethene	NELAP,CALAP,WADOE
Trichloroethene	CALAP,WADOE
Trichloroethene	NELAP,CALAP
Trichloroethene	NELAP,CALAP,WADOE
Trichloroethene	NELAP,WADOE
Tetrachloroethene	NELAP,CALAP,WADOE
Tetrachloroethene	NELAP,WADOE
Tetrachloroethene	CALAP,WADOE
Tetrachloroethene	NELAP,CALAP
1,1,2,2-Tetrachloroethane	NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	NELAP,CALAP
1,1,2,2-Tetrachloroethane	CALAP,WADOE



Seattle Public Utilities 700-5th Ave, Ste 4900, Box 34018 Seattle WA, 98124-4018	Project: South Park Landfill -Parametrix Water Project Number: 553-1550-067 Project Manager: Jeff Neuner	Reported: 23-Mar-2021 10:35
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1,1,2,2-Tetrachloroethane	NELAP,WADOE
1,2-Dichloroethane	NELAP,CALAP
1,2-Dichloroethane	CALAP,WADOE
1,2-Dichloroethane	NELAP,WADOE
1,2-Dichloroethane	NELAP,CALAP,WADOE
Benzene	NELAP,CALAP,WADOE
Benzene	NELAP,CALAP
Benzene	CALAP,WADOE
Benzene	NELAP,WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022



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Notes and Definitions

- * Flagged value is not within established control limits.
- 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.
- U This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
- 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.