

Parametrix No. 553-1550-067

Ryan Gardiner, Project Manager
Washington State Department of Ecology
Northwest Region Toxics Cleanup Program
15700 Dayton Ave. N.
Shoreline, Washington 98133

Re: South Park Landfill Second Quarter 2026 Progress Report

Dear Ryan:

This progress report provides an explanation of actions taken during the referenced period.

General Activities During the 2026 Second Quarter

SRDS Property

- The old South Transfer Station seep area (compactor shed) remains fenced off and locked. All existing safeguards remain in place.
- Solid Waste Operations and Household Hazardous Waste (HHW) collection continued on the Seattle Public Utilities (SPU) old South Transfer Station property.
- No waste audits were performed on the SRDS property during the second quarter.

CenterPoint South Park LLC Property

- The landfill gas system blowers continued to be remotely monitored.
- Routine operation and maintenance of the landfill gas system was conducted as scheduled during the quarter.
- Current tenants (Avis and MedLog) continued vehicle parking operations on CenterPoint property.
- Quarterly inspection of the methane alarms in the on-site building was conducted.
- Installation of interior fencing to separate the 3-acre yard for the new tenant (MedLog), including addition of an entry gate, began in January following material and scheduling delays. This work includes tying the existing electric fence into the new gate, which required trenching for electrical connections. Trenching involved removal of the asphalt cap to a depth of up to approximately 18 inches; the trenches will be backfilled and the asphalt cap restored in accordance with applicable specifications. Backfill has not been completed as the project is still pending inspection from the City of Seattle.

Overall Settlement Parcels

- **Second Quarter Compliance Monitoring**
 - SPU staff completed the second quarter compliance monitoring of the perimeter gas probes and groundwater wells.
 - The Parametrix team reviewed all field measurements and completed associated data management tasks.



- The following summarizes second quarter 2026 monitoring activities and response actions related to elevated methane at supplemental gas probe GP-32S:
 - Monitoring of GP-32S continued through June 3, 2026, in accordance with the Cleanup Action Plan (CAP) and the modified monitoring frequency approved by the Washington State Department of Ecology (Ecology) during periods when the probe was blocked by groundwater.
 - Indoor ambient air monitoring at the adjacent building was conducted monthly during the second quarter as a precautionary measure. Methane concentrations remained at background levels and well below applicable performance criteria. Following discussion with the Full Circle tenant, the monitoring frequency was reduced from monthly to quarterly on May 13, 2026.
 - A technical memorandum evaluating GP-32S conditions and providing recommendations was submitted to Ecology on December 1, 2025. Following continued discussions, the PLPs met with Ecology, the Washington State Attorney General's Office (AGO), and Public Health – Seattle & King County (PHSKC) on June 3, 2026 to discuss the long-term role of GP-32 and GP-32S in the compliance monitoring program.
 - Based on those discussions, the Site Coordinator prepared and submitted a proposed minor modification to the CAP on June 29, 2026, to remove GP-32 and GP-32S from the perimeter compliance monitoring network, discontinue monitoring, and decommission both probes. Ecology review is ongoing.
- **Cap Inspections**
 - The 2026 annual cap inspection was conducted in April. A report summarizing the findings of the inspection is scheduled for submittal to Ecology in the third quarter.
- **Other Actions**
 - On June 15, 2026, Ecology requested that the PLPs prepare a work plan for an initial groundwater screening investigation for per- and polyfluoroalkyl substances (PFAS) at the South Park Landfill. The PLPs are reviewing Ecology's request and preparing a response to Ecology.

Deviations from Samples, Required Tasks, CAP, or Schedule

Monitoring gas probe GP-32S deviated from CAP requirements during the second quarter due to groundwater levels rising above the screened interval, which periodically prevented collection of representative landfill gas measurements. As previously approved by Ecology, monitoring frequency was reduced from daily to weekly when the probe was not accessible.

Data Summary

Perimeter Gas Probes Monitoring

Monitoring Date: April 21, 2026

Conducted By: SPU



Three probes (GP-13, GP-15, and GP-32) were blocked by water at the time of monitoring; therefore, the corresponding supplemental probes (GP-13S, GP-15S, and GP-32S) were monitored.

One probe exceeded the regulatory action limit of 5% methane by volume. Methane was detected only at the following location:

Probe	CH4 (% by volume)	Blocked	Comments
GP-32S	73.8%	No	On June 29, 2026, the PLPs submitted a proposed minor modification to remove GP-32 and GP-32S from the perimeter compliance monitoring network. Ecology review is ongoing.

The elevated methane concentration at GP-32S was previously evaluated in a technical memorandum submitted to Ecology on December 1, 2025. Ecology review of the proposed minor modification is ongoing.

Quarterly monitoring data are provided in the attached records.

Groundwater Monitoring

Monitoring Dates: April 27-29, 2026

Conducted By: SPU

Laboratory Analysis: Performed by Analytical Resources, LLC

Data validation for the 2026 second quarter compliance monitoring event is complete. A trigger assessment for vinyl chloride has been completed and will be reported to Ecology in the 2026 annual report, consistent with recommendations provided in a technical memorandum submitted in January.

A draft groundwater quality data summary table, field sheets, and final laboratory reports are included as attachments.

Upcoming Activities

SRDS Property

- SPU has added significant scope changes to the STS Phase II project including combining stormwater treatment from the STS property to the SRDS property, larger trailer canopy, a combined electrical building, and crew quarters modifications. These changes resulted in numerous comments on the 90% permit design submittal from the Seattle Department of Construction and Inspections. Additionally, a change of subdesigners occurred during 100% design development that caused further delays. Final design is now anticipated in the third quarter of 2026 with advertisement and award of the construction contract to follow.
- No waste audits are anticipated for the third quarter of 2026 as of the date of this report.



- A previously identified underground water leak resulted in water service being shut off in 2025. The leak was isolated and repair or abandonment of the leaking water line will occur during STS Phase II construction.

CenterPoint Property

- Continue remote monitoring of the landfill gas system blowers.
- Complete third quarter 2026 operation and maintenance of the landfill gas system.
- Installation of interior fencing to separate larger lot (formerly occupied by First Student) into two lots and installation of new gate for the 3-acre area currently leased by MedLog. This includes trenching in the northwest corner of the 12-acre lot to connect the existing electric fence to the new gate. Completion of the project is pending inspection by the City of Seattle. Following inspection, the trench will be backfilled and the asphalt cap repaired in accordance with applicable specifications.
- Perform minor asphalt maintenance for small holes near the office trailer as well as some crack seal. All repairs will be made in accordance with applicable specifications.

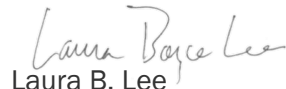
Overall Settlement Parcels

- Upon Ecology's written approval of the proposed minor modification, update the compliance monitoring program and decommission GP-32 and GP-32S.
- SPU will conduct third quarter 2026 compliance monitoring.
- Submit the 2026 annual cap inspection report.

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

Sincerely,

Parametrix



Laura B. Lee
Project Manager

cc: Mark Jusayan, SPU Solid Waste Capital Planning and Landfill Closure Program Manager
Shannon Straws, SPU Landfill Operations Supervisor
Ashley Piatek, CenterPoint Properties
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 STS Phase II Project Manager
Lucie Harpster, SPU Solid Waste Transfer Station Manager



Attachments

- 1 Draft Groundwater Quality Data Summary, Second Quarter 2026
- 2 Landfill Gas and Groundwater Compliance Monitoring Field Sheets, Second Quarter 2026
- 3 Second Quarter 2026 Groundwater Laboratory Data

Attachment 1

Draft Groundwater Quality
Data Summary,
Second Quarter 2026

Groundwater Quality Data Summary, Second Quarter 2026, South Park Landfill

			Upgradient Wells				Downgradient Wells											Trip Blanks			
			A-Zone				Perched Zone	A-Zone							B-Zone						
			MW-12	MW-60 (MW-12 Dup)	MW-14	MW-29	MW-30 ¹	MW-25	MW-61 (MW-25 Dup)	MW-26	MW-27	MW-31 ^{1,2}	MW-32 ³	MW-33 ³	MW-08	MW-10	MW-18 ³	MW-24	MW-80	MW-81	MW-82
Parameter	Units	Cleanup Level	4/28/26		4/28/26	4/27/26	4/29/26	4/28/26		4/29/26	4/29/26	4/29/26	4/27/26	4/27/26	4/29/26	4/28/26	4/28/26	4/29/26	4/27/26	4/28/26	4/29/26
Field Parameters																					
Temperature	C		12.1	--	13.5	12.7	13.4	14.0	--	13.3	12.1	14.0	14.0	15.1	12.5	13.9	14.7	13.6	--	--	--
Dissolved Oxygen	mg/L		0.38	--	0.14	0.10	0.19	0.11	--	0.54	0.13	0.27	0.21	0.13	0.10	0.11	0.09	0.09	--	--	--
Specific Conductivity	µS/cm		357.4	--	490.0	861	575	1182	--	231.9	396.2	548	1008	1169	1337	1550	617	1071	--	--	--
pH	units		6.28	--	6.61	6.83	6.11	6.51	--	6.12	6.36	6.26	6.77	6.92	6.57	6.74	6.75	6.48	--	--	--
Redox	mv		43.4	--	-33.0	-87.3	25.6	-75.2	--	37.0	30.2	-25.8	-93.1	-113.8	-55.3	-115.0	-89.3	-57.7	--	--	--
Turbidity	NTU		1.05	--	5.57	1.26	2.89	1.28	--	3.61	18.0	3.32	1.14	0.77	0.41	4.14	2.68	2.52	--	--	--
Metals																					
Iron, Total	mg/L	27 A-Zone	2.40	2.73	3.86	22.0	2.92	29.4	29.4	4.42	5.68	19.8	14.0	12.4	--	--	--	--	--	--	--
		31 B-Zone	--	--	--	--	--	--	--	--	--	--	--	--	12.9	31.3	14.6	24.6	--	--	--
Manganese, Total	mg/L	2.2	0.205	0.223	1.13	0.745	0.0904	2.63	2.42	0.0539	0.279	0.883	1.33	1.36	0.971	2.01	0.707	1.63	--	--	--
Volatile Organic Compounds																					
Vinyl Chloride	µg/L	0.29	0.0200 U	0.0200 U	0.0200 U	0.0679	0.0372	0.299	0.316	0.0200 U	0.0414	0.789	0.167	0.201	0.0465	0.184	0.0283	0.0247	0.0200 U	0.0200 U	0.0200 U
Cis-1,2-Dichloroethene	µg/L	16	0.30	0.29	0.20 U	0.20 U	0.34	0.21	0.21	0.43	0.20 U	0.38	0.41	0.20 U	0.20 U	0.96	0.20 U	0.20 U	0.20 U	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-31 is not a CPOC well, but is considered in vinyl chloride trigger condition 2 (the trend trigger).
- ³ MW 18 is completed in refuse along the downgradient edge of the Landfill; MW 32 and MW 33 are completed beneath refuse along the downgradient edge.

= Exceeds cleanup level for CPOC wells

-- = Not analyzed

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

Abbreviations:

- µg/L Micrograms per liter
- mg/L Milligrams per liter
- µS/cm Microsiemens per centimeter
- NTU Nephelometric Turbidity unit
- CPOC Conditional point of compliance

Attachment 2

Landfill Gas and Groundwater
Compliance Monitoring Field
Sheets,
Second Quarter 2026

South Park Landfill
Second Quarter 2026 Gas Probe Monitoring Data

Probe	Date	Time	By	CH4 %	CO2 %	O2 %	SP In/Wc	BP In/Hg	Blocked	Comment
GP03	04/21/2026	09:55	DF/WY	0.0	4.2	14.5	0.01	29.85	☐	
GP07	04/21/2026	09:33	DF/WY	0.0	1.7	19.0	0.05	29.85	☐	
GP09	04/21/2026	09:11	DF/WY	0.0	7.8	12.7	0.03	29.85	☐	
GP11	04/21/2026	09:50	DF/WY	0.0	0.7	20.4	0.05	29.85	☐	
GP13	04/21/2026	10:47	DF/WY	0.0	2.7	16.9	-14.54	29.85	☐	blocked by water at 129 sec
GP13S	04/21/2026	10:50	DF/WY	0.0	4.1	17.6	0.01	29.85	☐	60 sec purge
GP15	04/21/2026	11:09	DF/WY	0.0	5.7	11.5	0.07	29.85	☐	blocked by water at 337 sec
GP15S	04/21/2026	11:12	DF/WY	0.0	2.7	17.3	-0.04	29.85	☐	60 sec purge
GP16	04/21/2026	10:18	DF/WY	0.0	3.9	15.5	-0.01	29.85	☐	
GP23	04/21/2026	09:27	DF/WY	0.0	7.7	12.1	0.04	29.85	☐	
GP26	04/21/2026	08:31	DF/WY	0.0	2.0	18.6	-0.16	29.85	☐	
GP27	04/21/2026	10:35	DF/WY	0.0	8.6	0.3	0.02	29.85	☐	
GP28	04/21/2026	10:27	DF/WY	0.0	0.2	21.2	0.00	29.85	☐	
GP29	04/21/2026	10:22	DF/WY	0.0	13.2	2.7	0.05	29.85	☐	
GP31	04/21/2026	10:01	DF/WY	0.0	1.8	16.2	0.01	29.85	☐	
GP32	04/21/2026	10:54	DF/WY	0.0	0.2	19.2	0.48	29.85	☐	blocked by water at 19 sec
GP32S	04/21/2026	10:58	DF/WY	73.8	13.6	0.0	2.71	29.85	☐	60 sec purge
GP33	04/21/2026	09:03	DF/WY	0.0	0.3	20.2	-0.03	29.85	☐	
GP37	04/21/2026	08:46	DF/WY	0.0	8.4	6.7	0.03	29.85	☐	
GP38	04/21/2026	08:54	DF/WY	0.0	13.1	4.1	0.01	29.85	☐	

Water Level Measurement Field Report

DATE:	04/27/2026	JOB NO. 553-1550-067			
PROJECT: South Park Landfill		CLIENT: Seattle Public Utilities			
LOCATION: Seattle, WA					
WEATHER	TEMP	51	° at	8:15	AM
Cloudy		51	° at	9:35	AM
PRESENT AT SITE	T. Steimel	D. Favill	W. Yu		

THE FOLLOWING WAS NOTED:

WELL NUMBER	Time	Measured Depth to Water (ft from TOC or SG level)	Total Measured Well Depth (ft from TOC)	Measuring Point	Total Well Depth (ft bgs)	Screen Interval (ft bgs)	SU (ft)
MW-12	8:44	5.91		TOC	15.3	10 - 15	1.52
MW-14	8:48	2.57		TOC	21.8	11.5 - 21.5	0.8
MW-29	8:57	6.44		TOC	30	20 - 30	-0.29
MW-18	9:03	14.74		TOC	40.4	30 - 40	1.25
MW-25	8:38	13.35		TOC	27	22 - 27	2.79
MW-32	8:28	10.28		TOC	24	19 - 24	-0.44
MW-33	8:25	10.43		TOC	25	20 - 25	-0.47
MW-26	9:28	9.12		TOC	25	15 - 25	2.39
MW-27	9:34	7.75		TOC	20	10 - 20	2.04
MW-10	8:39	12.60		TOC	45	35 - 45	1.65
MW-24	9:27	8.27		TOC	45.3	35 - 45	1.56
MW-08	9:33	7.80		TOC	45.6	35.5 – 45.5	1.88
MW-30	9:21	9.55		TOC	13	8 - 13	-0.53
MW-31	9:16	10.53		TOC	23	18 - 23	-0.46

Comments:

TOC – top of PVC casing SG – staff gauge

SIGNED: _____

Dedicated bladder pump (PFAS free QED Well Wizard model # P1101M-Z) installed on 4/24/2026

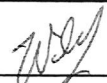
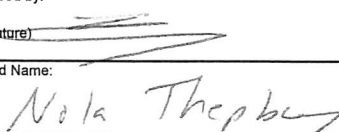
Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:		Turn-around Requested:			Date: 04/27/2026				 Analytical Resources, Incorporated Analytical Chemists and Consultants 4611 South 134th Place, Suite 100 Tukwila, WA 98168 206-695-6200 206-695-6201 (fax)							
ARI Client Company: City of Seattle/ Seattle Public Utilities		Phone: (206) 233-2629			Page: 1 of 1											
Client Contact: Shannon Straws, Laura Lee(Lblee@parametrix.com)					No. of Coolers: Cooler Temps: 4.1											
Client Project Name: South Park Landfill - Groundwater Sampling					Analysis Requested								Notes/Comments			
Client Project #: 553-1550-067		Samplers: T. Steimel D. Favill W. Yu			cis-1,2-DCE	Vinyl Chloride	Total FE, MN						Mark for MS/MSD			
Sample ID	Date	Time	Matrix	No. Containers												
SPL-GW-MW33-0428	4/27/2026	10:30	Water	7				3	3	1						
SPL-GW-MW32-0426	4/27/2026	11:30	Water	7				3	3	1						
SPL-GW-MW29-0426	4/27/2026	13:30	Water	7				3	3	1						
SPL-GW-MW80-0426	4/27/2026		Water	4				2	2							
Comments/Special Instructions					Relinquished by: (Signature) <i>Wilson Yu</i>			Received by: (Signature) <i>Sydni Acevedo</i>			Relinquished by: (Signature)			Received by: (Signature)		
					Printed Name: Wilson Yu			Printed Name: Sydni Acevedo			Printed Name:			Printed Name:		
					Company: SPU/K-H landfill			Company: ARLL			Company:			Company:		
					Date & Time: 4/27/2026 14:02			Date & Time: 4/27/26 1402			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

Sample Retention Policy: Unless specified by workorder 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 s

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:		Turn-around Requested:		Date: 04/28/2026		 Analytical Resources, Incorporated Analytical Chemists and Consultants 4611 South 134th Place, Suite 100 Tukwila, WA 98168 206-695-6200 206-695-6201 (fax)							
ARI Client Company: City of Seattle/ Seattle Public Utilities		Phone: (206) 233-2629		Page: 1 of 1									
Client Contact: Shannon Straws, Laura Lee(Lblee@parametrix.com)				No. of Coolers: 18 Cooler Temps:									
Client Project Name: South Park Landfill - Groundwater Sampling				Analysis Requested						Notes/Comments			
Client Project #: 553-1550-067		Samplers: T. Steimel D. Favill W. Yu		cis-1,2-DCE		Vinyl Chloride		Total FE, MN				Mark for MS/MSD	
Sample ID	Date	Time	Matrix	No. Containers									
SPL-GW-MW10-0426	4/28/2026	9:15	Water	7	3	3	1						
SPL-GW-MW25-0426	4/28/2026	10:00	Water	13	6	6	1						MS/MSD
SPL-GW-MW61-0426	4/28/2026	10:30	Water	7	3	3	1						
SPL-GW-MW14-0426	4/28/2026	12:10	Water	7	3	3	1						
SPL-GW-MW12-0426	4/28/2026	13:05	Water	13	6	6	1						MS/MSD
SPL-GW-MW60-0426	4/28/2026	13:35	Water	7	3	3	1						
SPL-GW-MW18-0426	4/28/2026	14:45	Water	7	3	3	1						
SPL-GW-MW81-0426	4/28/2026		Water	4	2	2							
Comments/Special Instructions				Relinquished by: (Signature)  Printed Name: Wilson Yu Company: SPU/K-H landfill Date & Time: 4/28/2026 15:10		Received by: (Signature)  Printed Name: Nola Thepby Company: ARLLC Date & Time: 4/28/26 1510		Relinquished by: (Signature) Printed Name: Company: Date & Time:		Received by: (Signature) Printed Name: Company: 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

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Chain of Custody Record & Laboratory Analysis Request

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ARI Client Company: City of Seattle/ Seattle Public Utilities		Phone: (206) 233-2629			Page: 1 of 1								
Client Contact: Shannon Straws, Laura Lee(Lblee@parametrix.com)					No. of Coolers: Cooler Temps: 3.8								
Client Project Name: South Park Landfill - Groundwater Sampling					Analysis Requested								Notes/Comments
Client Project #: 553-1550-067		Samplers: T. Steimel D. Favill W. Yu			cis-1,2-DCE	Vinyl Chloride	Total FE, MN						Mark for MS/MSD
Sample ID		Date	Time	Matrix									
SPL-GW-MW08-0426	4/29/2026	09:55	Water	7	3	3	1						
SPL-GW-MW27-0426	4/29/2026	10:55	Water	7	3	3	1						
SPL-GW-MW31-0426	4/29/2026	12:35	Water	7	3	3	1						
SPL-GW-MW30-0426	4/29/2026	13:20	Water	7	3	3	1						
SPL-GW-MW24-0426	4/29/2026	14:30	Water	7	3	3	1						
SPL-GW-MW26-0426	4/29/2026	15:20	Water	7	3	3	1						
SPL-GW-MW82-0426	4/29/2026		Water	4	2	2							
Comments/Special Instructions					Relinquished by: (Signature) <i>Wilson Yu</i>		Received by: (Signature) <i>Sydné Acevedo</i>		Relinquished by: (Signature)		Received by: (Signature)		
					Printed Name: Wilson Yu		Printed Name: Sydné Acevedo		Printed Name:		Printed Name:		
					Company: SPU/K-H landfill		Company: ARLLC		Company:		Company:		
					Date & Time: 4/29/2026 15:46		Date & Time: 4/29/26 1546		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

Sample Retention Policy: Unless specified by workorder 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 s

Attachment 3

Second Quarter 2026

Groundwater Laboratory Data



Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

06 May 2026

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

RE: South Park Landfill -Parametrix Water (553-155-067)

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

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

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

Associated Work Order(s)
26D0560

Associated SDG ID(s)
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.

Kelly Bottem, Client Services Manager



ARI Assigned Number: 26D0560		Turn-around Requested:		Date: 04/27/2026				Analytical Resources, Incorporated Analytical Chemists and Consultants 4611 South 134th Place, Suite 100 Tukwila, WA 98168 206-695-6200 206-695-6201 (fax)							
ARI Client Company: City of Seattle/ Seattle Public Utilities		Phone: (206) 233-2629		Page: 1 of 1											
Client Contact: Shannon Straws, Laura Lee(Lblee@parametrix.com)				No. of Coolers: Cooler Temps: 4.1											
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Client Project #: 553-1550-067		Samplers: T. Steimel D. Favill W. Yu			cis-1,2-DCE	Vinyl Chloride	Total FE, MN						Mark for MS/MSD		
Sample ID		Date	Time	Matrix				No. Containers							
SPL-GW-MW33-0428		4/27/2026	10:30	Water				7	3	3	1				
SPL-GW-MW32-0426		4/27/2026	11:30	Water				7	3	3	1				
SPL-GW-MW29-0426		4/27/2026	13:30	Water				7	3	3	1				
SPL-GW-MW80-0426		4/27/2026		Water				4	2	2					
Comments/Special Instructions				Relinquished by: (Signature) W. Yu			Received by: (Signature) Sydni Acevedo			Relinquished by: (Signature)			Received by: (Signature)		
				Printed Name: Wilson Yu			Printed Name: Sydni Acevedo			Printed Name:			Printed Name:		
				Company: SPU/K-H landfill			Company: ARUC			Company:			Company:		
				Date & Time: 4/27/2026 14:02			Date & Time: 4/27/26 1402			Date & Time:			Date & Time:		

Sample Retention Policy: Unless specified by workorder 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 s



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: Min-Soon Yim

Reported:

06-May-2026 09:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SPL-GW-MW33-0428	26D0560-01	Water	27-Apr-2026 10:30	27-Apr-2026 14:02
SPL-GW-MW32-0426	26D0560-02	Water	27-Apr-2026 11:30	27-Apr-2026 14:02
SPL-GW-MW29-0426	26D0560-03	Water	27-Apr-2026 13:30	27-Apr-2026 14:02
SPL-GW-MW80-0426	26D0560-04	Water	27-Apr-2026 10:30	27-Apr-2026 14:02



Seattle Public Utilities
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Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

Work Order Case Narrative

Client: Seattle Public Utilities
Project: South Park Landfill -Parametrix Water
Work Order: 26D0560

Sample receipt

Samples as listed on the preceding page were received 27-Apr-2026 14:02 under ARI work order 26D0560. 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.

Total Metals - EPA Method 6020B

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

Initial and continuing calibrations including interference checks were within method requirements for reported elements.

The method blank(s) contained manganese. Samples that contain manganese have been flagged with a "B" qualifier.



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Reported:

06-May-2026 09:07

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



WORK ORDER

26D0560

Client: Seattle Public Utilities

Project Manager: Kelly Bottem

Project: South Park Landfill -Parametrix Water

Project Number: 553-155-067

Preservation Confirmation

Container ID	Container Type	pH	pH Paper Lot#: <u>N000119</u>
26D0560-01 A	HDPE NM, 250mL HNO3	<u>L2p</u>	
26D0560-01 B	VOA Vial, Clear, 40 mL, HCL		
26D0560-01 C	VOA Vial, Clear, 40 mL, HCL		
26D0560-01 D	VOA Vial, Clear, 40 mL, HCL		
26D0560-01 E	VOA Vial, Clear, 40 mL		
26D0560-01 F	VOA Vial, Clear, 40 mL		
26D0560-01 G	VOA Vial, Clear, 40 mL		
26D0560-02 A	HDPE NM, 250mL HNO3	<u>L2p</u>	
26D0560-02 B	VOA Vial, Clear, 40 mL, HCL		
26D0560-02 C	VOA Vial, Clear, 40 mL, HCL		
26D0560-02 D	VOA Vial, Clear, 40 mL, HCL		
26D0560-02 E	VOA Vial, Clear, 40 mL		
26D0560-02 F	VOA Vial, Clear, 40 mL		
26D0560-02 G	VOA Vial, Clear, 40 mL		
26D0560-03 A	HDPE NM, 250mL HNO3	<u>L2p</u>	
26D0560-03 B	VOA Vial, Clear, 40 mL, HCL		
26D0560-03 C	VOA Vial, Clear, 40 mL, HCL		
26D0560-03 D	VOA Vial, Clear, 40 mL, HCL		
26D0560-03 E	VOA Vial, Clear, 40 mL		
26D0560-03 F	VOA Vial, Clear, 40 mL		
26D0560-03 G	VOA Vial, Clear, 40 mL		
26D0560-04 A	VOA Vial, Clear, 40 mL, HCL		
26D0560-04 B	VOA Vial, Clear, 40 mL, HCL		
26D0560-04 C	VOA Vial, Clear, 40 mL		
26D0560-04 D	VOA Vial, Clear, 40 mL		

SA

Preservation Confirmed By

4/27/26

Date



Cooler Receipt Form

ARI Client: SPU

Project Name: South Park Landfill

COC No(s): _____ (NA)

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

Assigned ARI Job No: 26D0560

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) Time 1402 4.1

Temp Gun ID#: 8117

Was a temperature blank included in the cooler? YES (NO)

Were coolers received between 0° - 6° (°C) YES NO

Was an attempt made to cool the samples? NA YES NO

Cooler Accepted by: SA Date: 4/27/26 Time: 1402

Complete custody forms and attach all shipping documents

Log-In Phase:

What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block N/A Other: _____

Are any samples that were out of temperature compliance documented in LIMS? 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: SA Date: 4/27/26 Time: 1415 Labels checked by: SA

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

Additional Notes, Discrepancies, & Resolutions:

By: _____

Date: _____



Seattle Public Utilities
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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW33-0428
26D0560-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 04/27/2026 10:30

Instrument: NT20 Analyst: FCL

Analyzed: 04/27/2026 19:45

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0560-01 D

Preparation Batch: BOD0547

Sample Size: 10 mL

Prepared: 04/27/2026

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
Surrogate: 1,2-Dichloroethane-d4			80-129 %	100	%	



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Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW33-0428
26D0560-01 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/27/2026 10:30

Instrument: NT16 Analyst: LTN

Analyzed: 04/28/2026 12:54

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0560-01 E

Preparation Batch: BOD0575

Sample Size: 10 mL

Prepared: 04/28/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.201	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	108	%	



Seattle Public Utilities

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Project: South Park Landfill -Parametrix Water

Project Number: 553-155-067

Project Manager: Min-Soon Yim

Reported:

06-May-2026 09:07

SPL-GW-MW33-0428

26D0560-01 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/27/2026 10:30

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 15:26

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0560-01 A

Preparation Batch: BOD0564

Sample Size: 25 mL

Prepared: 04/28/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.720	12.4	mg/L	D
Manganese	7439-96-5	20	0.0200	1.36	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW32-0426
26D0560-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/27/2026 11:30
Instrument: NT20 Analyst: FCL	Analyzed: 04/27/2026 20:08
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0547
	Prepared: 04/27/2026
	Sample Size: 10 mL
	Final Volume: 10 mL
	Extract ID: 26D0560-02 C

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.41	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	102	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW32-0426
26D0560-02 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/27/2026 11:30

Instrument: NT16 Analyst: LTN

Analyzed: 04/28/2026 13:14

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0560-02 E

Preparation Batch: BOD0575

Sample Size: 10 mL

Prepared: 04/28/2026

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	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	108	%	



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Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW32-0426
26D0560-02 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Sampled: 04/27/2026 11:30
Instrument: ICPMS1 Analyst: MRL	Analyzed: 05/04/2026 15:29
Sample Preparation:	Preparation Method: REN - EPA 3010A M
	Preparation Batch: BOD0564
	Prepared: 04/28/2026
	Sample Size: 25 mL
	Final Volume: 25 mL
	Extract ID: 26D0560-02 A

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.720	14.0	mg/L	D
Manganese	7439-96-5	20	0.0200	1.33	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW29-0426
26D0560-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/27/2026 13:30
Instrument: NT20 Analyst: FCL	Analyzed: 04/27/2026 20:31
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0547
	Sample Size: 10 mL
	Prepared: 04/27/2026
	Final Volume: 10 mL
	Extract ID: 26D0560-03 B

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	102	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW29-0426
26D0560-03 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/27/2026 13:30

Instrument: NT16 Analyst: LTN

Analyzed: 04/28/2026 13:35

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0560-03 E

Preparation Batch: BOD0575

Sample Size: 10 mL

Prepared: 04/28/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0679	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	109	%	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW29-0426
26D0560-03 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Sampled: 04/27/2026 13:30
Instrument: ICPMS1 Analyst: MRL	Analyzed: 05/04/2026 15:32
Sample Preparation:	Preparation Method: REN - EPA 3010A M
	Preparation Batch: BOD0564
	Prepared: 04/28/2026
	Sample Size: 25 mL
	Final Volume: 25 mL
	Extract ID: 26D0560-03 A

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.720	22.0	mg/L	D
Manganese	7439-96-5	20	0.0200	0.745	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW80-0426
26D0560-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/27/2026 10:30
Instrument: NT20 Analyst: FCL	Analyzed: 04/27/2026 20:55
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0547
	Prepared: 04/27/2026
	Sample Size: 10 mL
	Final Volume: 10 mL
	Extract ID: 26D0560-04 A

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	99.9	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

SPL-GW-MW80-0426
26D0560-04 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/27/2026 10:30

Instrument: NT16 Analyst: LTN

Analyzed: 04/28/2026 12:33

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0560-04 C

Preparation Batch: BOD0575

Sample Size: 10 mL

Prepared: 04/28/2026

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
Surrogate: 1,2-Dichloroethane-d4			80-129 %	104	%	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BOD0547 - EPA 8260D in Water

Instrument: NT20 Analyst: FCL

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BOD0547-BLK1) Prepared: 27-Apr-2026 Analyzed: 27-Apr-2026 14:20									
cis-1,2-Dichloroethene	ND	0.20	ug/L						U
Surrogate: 1,2-Dichloroethane-d4	4.86		ug/L	5.00		97.3 80-129			
LCS (BOD0547-BS1) Prepared: 27-Apr-2026 Analyzed: 27-Apr-2026 13:11									
cis-1,2-Dichloroethene	9.94	0.20	ug/L	10.0		99.4 80-121			
Surrogate: 1,2-Dichloroethane-d4	4.58		ug/L	5.00		91.5 80-129			
LCS Dup (BOD0547-BSD1) Prepared: 27-Apr-2026 Analyzed: 27-Apr-2026 13:34									
cis-1,2-Dichloroethene	8.63	0.20	ug/L	10.0		86.3 80-121	14.10	30	
Surrogate: 1,2-Dichloroethane-d4	4.63		ug/L	5.00		92.6 80-129			



Seattle Public Utilities
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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - SIM - Quality Control

Batch BOD0575 - EPA 8260D-SIM in Water

Instrument: NT16 Analyst: LTN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BOD0575-BLK1) Prepared: 28-Apr-2026 Analyzed: 28-Apr-2026 12:09									
Vinyl chloride	ND	0.0200	ug/L						U
Surrogate: 1,2-Dichloroethane-d4	5290		ug/L	5000		106 80-129			
LCS (BOD0575-BS1) Prepared: 28-Apr-2026 Analyzed: 28-Apr-2026 11:28									
Vinyl chloride	1.70	0.0200	ug/L	2.00		84.9 62-141			
Surrogate: 1,2-Dichloroethane-d4	5390		ug/L	5000		108 80-129			
LCS Dup (BOD0575-BSD1) Prepared: 28-Apr-2026 Analyzed: 28-Apr-2026 11:48									
Vinyl chloride	1.84	0.0200	ug/L	2.00		91.9 62-141	7.98	30	
Surrogate: 1,2-Dichloroethane-d4	5370		ug/L	5000		107 80-129			



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
06-May-2026 09:07

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BOD0564 - EPA 6020B in Water

Instrument: ICPMS1 Analyst: HAL

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BOD0564-BLK1)					Prepared: 28-Apr-2026 Analyzed: 28-Apr-2026 17:51					
Manganese	55	0.00124	0.00100	mg/L						
Blank (BOD0564-BLK2)					Prepared: 28-Apr-2026 Analyzed: 04-May-2026 14:39					
Iron	54	ND	0.0360	mg/L						U
LCS (BOD0564-BS1)					Prepared: 28-Apr-2026 Analyzed: 28-Apr-2026 18:01					
Manganese	55	0.0270	0.00100	mg/L	0.0250		108 80-120			B
LCS (BOD0564-BS2)					Prepared: 28-Apr-2026 Analyzed: 04-May-2026 14:45					
Iron	54	5.17	0.0360	mg/L	5.00		103 80-120			



Seattle Public Utilities

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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water

Project Number: 553-155-067

Project Manager: Min-Soon Yim

Reported:

06-May-2026 09:07

Uncertified Analytes included in this Report

Analysis Matrix & Analyte

None

Certified Analyses included in this Report

Analysis Matrix & Analyte

Certification Codes

EPA 6020B in Water

Iron-54 NELAP,DoD-ELAP,WADOE

Manganese-55 NELAP,DoD-ELAP,WADOE

EPA 8260D in Water

cis-1,2-Dichloroethene ADEC,NELAP,WADOE,DoD-ELAP

EPA 8260D-SIM in Water

Vinyl chloride NELAP,WADOE

Certifications

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	02/28/2027
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	01/31/2027
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-018	05/12/2026
WADOE	WA Dept of Ecology	C558	06/30/2026



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Project: South Park Landfill -Parametrix Water

Project Number: 553-155-067

Project Manager: Min-Soon Yim

Reported:

06-May-2026 09:07

Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution.
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.
!	Indicates that ARL is NOT ACCREDITED for this parameter in samples logged as 'Drinking Water'
#	Indicates that ARL is NOT ACCREDITED for this parameter in this analysis and matrix.



Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

17 June 2026

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

RE: South Park Landfill -Parametrix Water (553-155-067)

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

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

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

Associated Work Order(s)
26D0601

Associated SDG ID(s)
N/A

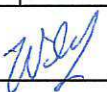
I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all 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.

Matthew Daniel For Kelly Bottem, Client Services Manager



Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 26D0601		Turn-around Requested:		Date: 04/28/2026				 Analytical Resources, Incorporated Analytical Chemists and Consultants 4611 South 134th Place, Suite 100 Tukwila, WA 98168 206-695-6200 206-695-6201 (fax)								
ARI Client Company: City of Seattle/ Seattle Public Utilities		Phone: (206) 233-2629		Page: 1 of 1												
Client Contact: Shannon Straws, Laura Lee(Lblee@parametrix.com)				No. of Coolers: Cooler Temps: 1.8												
Client Project Name: South Park Landfill - Groundwater Sampling					Analysis Requested								Notes/Comments			
Client Project #: 553-1550-067		Samplers: T. Steimel D. Favill W. Yu			cis-1,2-DCE	Vinyl Chloride	Total FE, MN							Mark for MS/MSD		
Sample ID	Date	Time	Matrix	No. Containers												
SPL-GW-MW10-0426	4/28/2026	9:15	Water	7				3	3	1						
SPL-GW-MW25-0426	4/28/2026	10:00	Water	13				6	6	1					MS/MSD	
SPL-GW-MW61-0426	4/28/2026	10:30	Water	7				3	3	1						
SPL-GW-MW14-0426	4/28/2026	12:10	Water	7				3	3	1						
SPL-GW-MW12-0426	4/28/2026	13:05	Water	13				6	6	1					MS/MSD	
SPL-GW-MW60-0426	4/28/2026	13:35	Water	7				3	3	1						
SPL-GW-MW18-0426	4/28/2026	14:45	Water	7				3	3	1						
SPL-GW-MW81-0426	4/28/2026		Water	4				2	2							
Comments/Special Instructions					Relinquished by: (Signature) 			Received by: (Signature) 			Relinquished by: (Signature)			Received by: (Signature)		
					Printed Name: Wilson Yu			Printed Name: Nola Thepby			Printed Name:			Printed Name:		
					Company: SPU/K-H landfill			Company: ARLLC			Company:			Company:		
					Date & Time: 4/28/2026 15:10			Date & Time: 4/28/26 1510			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

Sample Retention Policy: Unless specified by workorder 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 s



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: Min-Soon Yim

Reported:

17-Jun-2026 10:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SPL-GW-MW10-0426	26D0601-01	Water	28-Apr-2026 09:15	28-Apr-2026 15:10
SPL-GW-MW25-0426	26D0601-02	Water	28-Apr-2026 10:00	28-Apr-2026 15:10
SPL-GW-MW61-0426	26D0601-03	Water	28-Apr-2026 10:30	28-Apr-2026 15:10
SPL-GW-MW14-0426	26D0601-04	Water	28-Apr-2026 12:10	28-Apr-2026 15:10
SPL-GW-MW12-0426	26D0601-05	Water	28-Apr-2026 13:05	28-Apr-2026 15:10
SPL-GW-MW60-0426	26D0601-06	Water	28-Apr-2026 13:35	28-Apr-2026 15:10
SPL-GW-MW18-0426	26D0601-07	Water	28-Apr-2026 14:45	28-Apr-2026 15:10
SPL-GW-MW81-0426	26D0601-08	Water	28-Apr-2026 09:15	28-Apr-2026 15:10



Seattle Public Utilities
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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

Work Order Case Narrative

Client: Seattle Public Utilities
Project: South Park Landfill -Parametrix Water
Work Order: 26D0601

Revised Report 06/17/26

This report has been revised to include clarification of the "B"- flagged EPA 6020B results. Per ARL procedures, metals results are "B" flagged when the blank result is greater than one half the MRL. This project requests that results below the MRL not be reported. The Mn result in the blank is greater than the MDL but less than the MRL, per project requirements, the result is reported as ND at 1.0 in the blank, but due to laboratory protocol, the LIMS system is still 'B' flagging samples.

Sample receipt

Samples as listed on the preceding page were received 28-Apr-2026 15:10 under ARI work order 26D0601. 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.

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.

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: 553-155-067

Project Manager: Min-Soon Yim

Reported:

17-Jun-2026 10:48

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Total Metals - EPA Method 6020B

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

Initial and continuing calibrations including interference checks were within method requirements for reported elements.

The method blank(s) contained manganese. Samples that contain manganese have been flagged with a "B" qualifier.

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

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.



WORK ORDER

26D0601

Client: Seattle Public Utilities

Project Manager: Kelly Bottem

Project: South Park Landfill - Parametrix Water

Project Number: 553-155-067

Preservation Confirmation

Container ID	Container Type	pH	pH Paper Lot#: <u>N000119</u>
26D0601-01 A	VOA Vial, Clear, 40 mL, HCL		
26D0601-01 B	VOA Vial, Clear, 40 mL, HCL		
26D0601-01 C	VOA Vial, Clear, 40 mL, HCL		
26D0601-01 D	VOA Vial, Clear, 40 mL		
26D0601-01 E	VOA Vial, Clear, 40 mL		
26D0601-01 F	VOA Vial, Clear, 40 mL		
26D0601-01 G	HDPE NM, 250mL HNO3	<2 P	
26D0601-02 A	VOA Vial, Clear, 40 mL, HCL		
26D0601-02 B	VOA Vial, Clear, 40 mL, HCL		
26D0601-02 C	VOA Vial, Clear, 40 mL, HCL		
26D0601-02 D	VOA Vial, Clear, 40 mL, HCL		
26D0601-02 E	VOA Vial, Clear, 40 mL, HCL		
26D0601-02 F	VOA Vial, Clear, 40 mL, HCL		
26D0601-02 G	VOA Vial, Clear, 40 mL		
26D0601-02 H	VOA Vial, Clear, 40 mL		
26D0601-02 I	VOA Vial, Clear, 40 mL		
26D0601-02 J	VOA Vial, Clear, 40 mL		
26D0601-02 K	VOA Vial, Clear, 40 mL		
26D0601-02 L	VOA Vial, Clear, 40 mL		
26D0601-02 M	HDPE NM, 250mL HNO3	<2 P	
26D0601-03 A	VOA Vial, Clear, 40 mL, HCL		
26D0601-03 B	VOA Vial, Clear, 40 mL, HCL		
26D0601-03 C	VOA Vial, Clear, 40 mL, HCL		
26D0601-03 D	VOA Vial, Clear, 40 mL		
26D0601-03 E	VOA Vial, Clear, 40 mL		
26D0601-03 F	VOA Vial, Clear, 40 mL		
26D0601-03 G	HDPE NM, 250mL HNO3	<2 P	
26D0601-04 A	VOA Vial, Clear, 40 mL, HCL		
26D0601-04 B	VOA Vial, Clear, 40 mL, HCL		
26D0601-04 C	VOA Vial, Clear, 40 mL, HCL		
26D0601-04 D	VOA Vial, Clear, 40 mL		
26D0601-04 E	VOA Vial, Clear, 40 mL		



WORK ORDER

26D0601

Client: Seattle Public Utilities

Project Manager: Kelly Bottem

Project: South Park Landfill -Parametrix Water

Project Number: 553-155-067

26D0601-04 F	VOA Vial, Clear, 40 mL	
26D0601-04 G	HDPE NM, 250mL HNO3	<2 P
26D0601-05 A	VOA Vial, Clear, 40 mL, HCL	
26D0601-05 B	VOA Vial, Clear, 40 mL, HCL	
26D0601-05 C	VOA Vial, Clear, 40 mL, HCL	
26D0601-05 D	VOA Vial, Clear, 40 mL, HCL	
26D0601-05 E	VOA Vial, Clear, 40 mL, HCL	
26D0601-05 F	VOA Vial, Clear, 40 mL, HCL	
26D0601-05 G	VOA Vial, Clear, 40 mL	
26D0601-05 H	VOA Vial, Clear, 40 mL	
26D0601-05 I	VOA Vial, Clear, 40 mL	
26D0601-05 J	VOA Vial, Clear, 40 mL	
26D0601-05 K	VOA Vial, Clear, 40 mL	
26D0601-05 L	VOA Vial, Clear, 40 mL	
26D0601-05 M	HDPE NM, 250mL HNO3	<2 P
26D0601-06 A	VOA Vial, Clear, 40 mL, HCL	
26D0601-06 B	VOA Vial, Clear, 40 mL, HCL	
26D0601-06 C	VOA Vial, Clear, 40 mL, HCL	
26D0601-06 D	VOA Vial, Clear, 40 mL	
26D0601-06 E	VOA Vial, Clear, 40 mL	
26D0601-06 F	VOA Vial, Clear, 40 mL	
26D0601-06 G	HDPE NM, 250mL HNO3	<2 P
26D0601-07 A	VOA Vial, Clear, 40 mL, HCL	
26D0601-07 B	VOA Vial, Clear, 40 mL, HCL	
26D0601-07 C	VOA Vial, Clear, 40 mL, HCL	
26D0601-07 D	VOA Vial, Clear, 40 mL	
26D0601-07 E	VOA Vial, Clear, 40 mL	
26D0601-07 F	VOA Vial, Clear, 40 mL	
26D0601-07 G	HDPE NM, 250mL HNO3	<2 P
26D0601-08 A	VOA Vial, Clear, 40 mL, HCL	
26D0601-08 B	VOA Vial, Clear, 40 mL, HCL	
26D0601-08 C	VOA Vial, Clear, 40 mL	
26D0601-08 D	VOA Vial, Clear, 40 mL	



WORK ORDER

26D0601

Client: Seattle Public Utilities

Project Manager: Kelly Bottem

Project: South Park Landfill - Parametrix Water

Project Number: 553-155-067

NDT

Preservation Confirmed By

04/28/26

Date

Cooler Receipt Form

ARI Client: Seattle Public Utilities

Project Name: South Park Landfill

COC No(s): _____ (NA)

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

Assigned ARI Job No: 26D0601

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) Time 1510 _____ 1.8 _____

Temp Gun ID#: 8117

Was a temperature blank included in the cooler? _____

YES (NO)

Were coolers received between 0° - 6° (°C) _____

YES (NO)

Was an attempt made to cool the samples? _____

NA YES (NO)

Cooler Accepted by: NDT Date: 04/28/26 Time: 1510

Complete custody forms and attach all shipping documents

Log-In Phase:

What kind of packing material was used? _____

Bubble Wrap Wet Ice Gel Packs Baggies Foam Block N/A Other: _____

Are any samples that were out of temperature compliance documented in LIMS? _____

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: NDT Date: 04/28/26 Time: 1532 Labels checked by: NDT

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

Additional Notes, Discrepancies, & Resolutions:

By: _____

Date: _____



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: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW10-0426
26D0601-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 04/28/2026 09:15

Instrument: NT20 Analyst: FCL

Analyzed: 04/29/2026 16:02

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0601-01 A

Preparation Batch: BOD0619

Sample Size: 10 mL

Prepared: 04/29/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.96	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	99.2	%	



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Reported:
17-Jun-2026 10:48

SPL-GW-MW10-0426
26D0601-01 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/28/2026 09:15

Instrument: NT16 Analyst: LTN

Analyzed: 04/29/2026 12:05

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0601-01 D

Preparation Batch: BOD0614

Sample Size: 10 mL

Prepared: 04/29/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.184	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	110	%	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW10-0426
26D0601-01 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/28/2026 09:15

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 16:21

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0601-01 G

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	50	1.80	31.3	mg/L	D
Manganese	7439-96-5	50	0.0500	2.01	mg/L	D, B



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW25-0426
26D0601-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/28/2026 10:00
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 16:25
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0601-02 A

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.21	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	98.9	%	



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Reported:
17-Jun-2026 10:48

SPL-GW-MW25-0426
26D0601-02 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/28/2026 10:00

Instrument: NT16 Analyst: LTN

Analyzed: 04/29/2026 12:26

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0601-02 G

Preparation Batch: BOD0614

Sample Size: 10 mL

Prepared: 04/29/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.299	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	108	%	



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Project: South Park Landfill -Parametrix Water
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Reported:
17-Jun-2026 10:48

SPL-GW-MW25-0426
26D0601-02 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/28/2026 10:00

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 16:53

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0601-02 M

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	50	1.80	29.4	mg/L	D
Manganese	7439-96-5	50	0.0500	2.63	mg/L	D, B



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW61-0426
26D0601-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/28/2026 10:30
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 16:49
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0601-03 A

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.21	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	98.4	%	



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Reported:
17-Jun-2026 10:48

SPL-GW-MW61-0426
26D0601-03 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/28/2026 10:30

Instrument: NT16 Analyst: LTN

Analyzed: 04/29/2026 12:47

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0601-03 D

Preparation Batch: BOD0614

Sample Size: 10 mL

Prepared: 04/29/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.316	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	108	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW61-0426
26D0601-03 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Sampled: 04/28/2026 10:30
Instrument: ICPMS1 Analyst: MRL	Analyzed: 05/04/2026 15:35
Sample Preparation:	Preparation Method: REN - EPA 3010A M
	Preparation Batch: BOD0636
	Prepared: 04/30/2026
	Sample Size: 25 mL
	Final Volume: 25 mL
	Extract ID: 26D0601-03 G

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.720	29.4	mg/L	D
Manganese	7439-96-5	20	0.0200	2.42	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW14-0426
26D0601-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/28/2026 12:10
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 17:12
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0601-04 A

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	100	%	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW14-0426
26D0601-04 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/28/2026 12:10

Instrument: NT16 Analyst: LTN

Analyzed: 04/29/2026 13:08

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0601-04 D

Preparation Batch: BOD0614

Sample Size: 10 mL

Prepared: 04/29/2026

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
Surrogate: 1,2-Dichloroethane-d4			80-129 %	110	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW14-0426
26D0601-04 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/28/2026 12:10

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 15:38

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0601-04 G

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.720	3.86	mg/L	D
Manganese	7439-96-5	20	0.0200	1.13	mg/L	D, B



Seattle Public Utilities
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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW12-0426
26D0601-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/28/2026 13:05
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 17:36
Sample Preparation:	Extract ID: 26D0601-05 A
Preparation Method: EPA 5030C (Purge and Trap)	
Preparation Batch: BOD0619	Sample Size: 10 mL
Prepared: 04/29/2026	Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.30	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	99.6	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW12-0426
26D0601-05 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/28/2026 13:05

Instrument: NT16 Analyst: LTN

Analyzed: 04/29/2026 13:30

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0601-05 G

Preparation Batch: BOD0614

Sample Size: 10 mL

Prepared: 04/29/2026

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
Surrogate: 1,2-Dichloroethane-d4			80-129 %	111	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW12-0426
26D0601-05 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Sampled: 04/28/2026 13:05
Instrument: ICPMS1 Analyst: MRL	Analyzed: 05/04/2026 16:41
Sample Preparation:	Preparation Method: REN - EPA 3010A M
	Preparation Batch: BOD0636
	Prepared: 04/30/2026
	Sample Size: 25 mL
	Final Volume: 25 mL
	Extract ID: 26D0601-05 M

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	10	0.360	2.40	mg/L	D
Manganese	7439-96-5	10	0.0100	0.205	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW60-0426
26D0601-06 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/28/2026 13:35
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 17:59
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Prepared: 04/29/2026
	Sample Size: 10 mL
	Final Volume: 10 mL
	Extract ID: 26D0601-06 A

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.29	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	102	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW60-0426
26D0601-06 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/28/2026 13:35

Instrument: NT16 Analyst: LTN

Analyzed: 04/29/2026 13:51

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0601-06 D

Preparation Batch: BOD0614

Sample Size: 10 mL

Prepared: 04/29/2026

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
Surrogate: 1,2-Dichloroethane-d4			80-129 %	112	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW60-0426
26D0601-06 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/28/2026 13:35

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 16:24

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0601-06 G

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	50	1.80	2.73	mg/L	D
Manganese	7439-96-5	50	0.0500	0.223	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW18-0426
26D0601-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/28/2026 14:45
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 18:23
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0601-07 A

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	98.4	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW18-0426
26D0601-07 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/28/2026 14:45

Instrument: NT16 Analyst: LTN

Analyzed: 04/29/2026 14:12

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0601-07 D

Preparation Batch: BOD0614

Sample Size: 10 mL

Prepared: 04/29/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0283	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	112	%	



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Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW18-0426
26D0601-07 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/28/2026 14:45

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 16:50

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0601-07 G

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.720	14.6	mg/L	D
Manganese	7439-96-5	20	0.0200	0.707	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW81-0426
26D0601-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/28/2026 09:15
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 15:15
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0601-08 B

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	99.1	%	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

SPL-GW-MW81-0426
26D0601-08 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/28/2026 09:15

Instrument: NT16 Analyst: LTN

Analyzed: 04/29/2026 11:44

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0601-08 C

Preparation Batch: BOD0614

Sample Size: 10 mL

Prepared: 04/29/2026

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
Surrogate: 1,2-Dichloroethane-d4			80-129 %	108	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BOD0619 - EPA 8260D in Water

Instrument: NT20 Analyst: FCL

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BOD0619-BLK1)		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 13:58								
cis-1,2-Dichloroethene	ND	0.20	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	4.95		ug/L	5.00		98.9	80-129			
LCS (BOD0619-BS1)		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 13:11								
cis-1,2-Dichloroethene	10.2	0.20	ug/L	10.0		102	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.81		ug/L	5.00		96.1	80-129			
LCS Dup (BOD0619-BSD1)		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 14:21								
cis-1,2-Dichloroethene	10.2	0.20	ug/L	10.0		102	80-121	0.46	30	
Surrogate: 1,2-Dichloroethane-d4	4.82		ug/L	5.00		96.4	80-129			
Matrix Spike (BOD0619-MS1)		Source: 26D0601-02		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 22:17						
cis-1,2-Dichloroethene	10.2	0.20	ug/L	10.0	0.21	100	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.98		ug/L	5.00	4.94	99.5	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike (BOD0619-MS2)		Source: 26D0601-05		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 23:05						
cis-1,2-Dichloroethene	10.8	0.20	ug/L	10.0	0.30	105	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.74		ug/L	5.00	4.98	94.8	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BOD0619-MSD1)		Source: 26D0601-02		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 22:41						
cis-1,2-Dichloroethene	10.1	0.20	ug/L	10.0	0.21	99.3	80-121	0.77	30	
Surrogate: 1,2-Dichloroethane-d4	4.84		ug/L	5.00	4.94	96.8	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BOD0619-MSD2)		Source: 26D0601-05		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 23:29						
cis-1,2-Dichloroethene	10.9	0.20	ug/L	10.0	0.30	106	80-121	1.18	30	
Surrogate: 1,2-Dichloroethane-d4	4.66		ug/L	5.00	4.98	93.2	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - SIM - Quality Control

Batch BOD0614 - EPA 8260D-SIM in Water

Instrument: NT16 Analyst: LTN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BOD0614-BLK1)				Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 09:53						
Vinyl chloride	ND	0.0200	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5250		ug/L	5000		105	80-129			
LCS (BOD0614-BS1)				Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 09:11						
Vinyl chloride	1.70	0.0200	ug/L	2.00		85.2	62-141			
Surrogate: 1,2-Dichloroethane-d4	5420		ug/L	5000		108	80-129			
LCS Dup (BOD0614-BSD1)				Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 09:32						
Vinyl chloride	1.86	0.0200	ug/L	2.00		92.8	62-141	8.51	30	
Surrogate: 1,2-Dichloroethane-d4	5430		ug/L	5000		109	80-129			
Matrix Spike (BOD0614-MS1)				Source: 26D0601-02		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 14:33				
Vinyl chloride	1.87	0.0200	ug/L	2.00	0.299	78.4	62-141			
Surrogate: 1,2-Dichloroethane-d4	5670		ug/L	5000	5410	113	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike (BOD0614-MS2)				Source: 26D0601-05		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 15:16				
Vinyl chloride	1.73	0.0200	ug/L	2.00	ND	86.3	62-141			
Surrogate: 1,2-Dichloroethane-d4	5590		ug/L	5000	5540	112	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BOD0614-MSD1)				Source: 26D0601-02		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 14:54				
Vinyl chloride	2.12	0.0200	ug/L	2.00	0.299	90.9	62-141	12.50	30	
Surrogate: 1,2-Dichloroethane-d4	5660		ug/L	5000	5410	113	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BOD0614-MSD2)				Source: 26D0601-05		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 15:37				
Vinyl chloride	1.67	0.0200	ug/L	2.00	ND	83.3	62-141	3.54	30	
Surrogate: 1,2-Dichloroethane-d4	5580		ug/L	5000	5540	112	80-129			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:48

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BOD0636 - EPA 6020B in Water

Instrument: ICPMS1 Analyst: HAL

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BOD0636-BLK1)			Prepared: 30-Apr-2026 Analyzed: 30-Apr-2026 17:14								
Manganese	55	ND	0.00100	mg/L							U
Blank (BOD0636-BLK3)			Prepared: 30-Apr-2026 Analyzed: 04-May-2026 18:02								
Iron	54	ND	0.0360	mg/L							U
Iron	57	ND	0.0360	mg/L							U
LCS (BOD0636-BS1)			Prepared: 30-Apr-2026 Analyzed: 30-Apr-2026 17:18								
Manganese	55	0.0268	0.00100	mg/L	0.0250		107	80-120			B
LCS (BOD0636-BS3)			Prepared: 30-Apr-2026 Analyzed: 04-May-2026 18:05								
Iron	54	5.31	0.0360	mg/L	5.00		106	80-120			
Iron	57	5.35	0.0360	mg/L	5.00		107	80-120			
Duplicate (BOD0636-DUP1)			Source: 26D0601-02		Prepared: 30-Apr-2026 Analyzed: 04-May-2026 16:56						
Iron	54	30.8	1.80	mg/L		29.4			4.65	20	D
Manganese	55	2.73	0.0500	mg/L		2.63			3.71	20	D, B
Matrix Spike (BOD0636-MS1)			Source: 26D0601-02		Prepared: 30-Apr-2026 Analyzed: 04-May-2026 16:59						
Iron	54	36.0	1.80	mg/L	5.00	29.4	132	75-125			HC, D
Manganese	55	2.82	0.0500	mg/L	0.0250	2.63	769	75-125			HC, D, B
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike Dup (BOD0636-MSD1)			Source: 26D0601-02		Prepared: 30-Apr-2026 Analyzed: 04-May-2026 17:02						
Iron	54	36.2	1.80	mg/L	5.00	29.4	135	75-125	0.49	20	HC, D
Manganese	55	2.79	0.0500	mg/L	0.0250	2.63	649	75-125	1.06	20	HC, D, B

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



Seattle Public Utilities

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Project: South Park Landfill -Parametrix Water

Project Number: 553-155-067

Project Manager: Min-Soon Yim

Reported:

17-Jun-2026 10:48

Uncertified Analytes included in this Report

Analysis Matrix & Analyte

None

Certified Analyses included in this Report

Analysis Matrix & Analyte

Certification Codes

EPA 6020B in Water

Iron-54	NELAP,DoD-ELAP,WADOE
Iron-57	NELAP,DoD-ELAP,WADOE
Manganese-55	NELAP,DoD-ELAP,WADOE

EPA 8260D in Water

cis-1,2-Dichloroethene	ADEC,NELAP,WADOE,DoD-ELAP
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EPA 8260D-SIM in Water

Vinyl chloride	NELAP,WADOE
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Certifications

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	02/28/2027
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	01/31/2027
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-018	05/12/2027
WADOE	WA Dept of Ecology	C558	06/30/2026



Seattle Public Utilities

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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water

Project Number: 553-155-067

Project Manager: Min-Soon Yim

Reported:

17-Jun-2026 10:48

Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution.
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.
!	Indicates that ARL is NOT ACCREDITED for this parameter in samples logged as 'Drinking Water'
#	Indicates that ARL is NOT ACCREDITED for this parameter in this analysis and matrix.



Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

17 June 2026

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

RE: South Park Landfill -Parametrix Water (553-155-067)

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

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

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

Associated Work Order(s)
26D0625

Associated SDG ID(s)
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.

Matthew Daniel For Kelly Bottem, Client Services Manager



ARI Assigned Number: 26 D0625		Turn-around Requested:			Date: 04/29/2026								 Analytical Resources, Incorporated Analytical Chemists and Consultants 4611 South 134th Place, Suite 100 Tukwila, WA 98168 206-695-6200 206-695-6201 (fax)			
ARI Client Company: City of Seattle/ Seattle Public Utilities			Phone: (206) 233-2629		Page: 1 of 1											
Client Contact: Shannon Straws, Laura Lee(Lblee@parametrix.com)					No. of Coolers:		Cooler Temps: 3.8									
Client Project Name: South Park Landfill - Groundwater Sampling					Analysis Requested										Notes/Comments	
Client Project #: 553-1550-067		Samplers: T. Steimel D. Favill W. Yu			cis-1,2-DCE	Vinyl Chloride	Total FE, MN							Mark for MS/MSD		
Sample ID	Date	Time	Matrix	No. Containers												
SPL-GW-MW08-0426	4/29/2026	09:55	Water	7												
SPL-GW-MW27-0426	4/29/2026	10:55	Water	7												
SPL-GW-MW31-0426	4/29/2026	12:35	Water	7												
SPL-GW-MW30-0426	4/29/2026	13:20	Water	7												
SPL-GW-MW24-0426	4/29/2026	14:30	Water	7												
SPL-GW-MW26-0426	4/29/2026	15:20	Water	7												
SPL-GW-MW82-0426	4/29/2026		Water	4												
Comments/Special Instructions					Relinquished by: (Signature) 			Received by: (Signature) 			Relinquished by:			Received by:		
					Printed Name: Wilson Yu			Printed Name: Sydney Acevedo			Printed Name:			Printed Name:		
					Company: SPU/K-H landfill			Company: ARLLC			Company:			Company:		
					Date & Time: 4/29/2026 15:46			Date & Time: 4/29/26 1546			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

Sample Retention Policy: Unless specified by workorder 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 s



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: Min-Soon Yim

Reported:

17-Jun-2026 10:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SPL-GW-MW08-0426	26D0625-01	Water	29-Apr-2026 09:55	29-Apr-2026 15:46
SPL-GW-MW27-0426	26D0625-02	Water	29-Apr-2026 10:55	29-Apr-2026 15:46
SPL-GW-MW31-0426	26D0625-03	Water	29-Apr-2026 12:35	29-Apr-2026 15:46
SPL-GW-MW30-0426	26D0625-04	Water	29-Apr-2026 13:20	29-Apr-2026 15:46
SPL-GW-MW24-0426	26D0625-05	Water	29-Apr-2026 14:30	29-Apr-2026 15:46
SPL-GW-MW26-0426	26D0625-06	Water	29-Apr-2026 15:20	29-Apr-2026 15:46
SPL-GW-MW82-0426	26D0625-07	Water	29-Apr-2026 09:55	29-Apr-2026 15:46



Seattle Public Utilities
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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

Work Order Case Narrative

Client: Seattle Public Utilities
Project: South Park Landfill -Parametrix Water
Work Order: 26D0625

Revised Report 06/17/26

This report has been revised to include clarification of the "B"- flagged EPA 6020B results. Per ARL procedures, metals results are "B" flagged when the blank result is greater than one half the MRL. This project requests that results below the MRL not be reported. The Mn result in the blank is greater than the MDL but less than the MRL, per project requirements, the result is reported as ND at 1.0 in the blank, but due to laboratory protocol, the LIMS system is still 'B' flagging samples.

Sample receipt

Samples as listed on the preceding page were received 29-Apr-2026 15:46 under ARI work order 26D0625. 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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Seattle WA, 98124-4018

Project: South Park Landfill -Parametrix Water

Project Number: 553-155-067

Project Manager: Min-Soon Yim

Reported:

17-Jun-2026 10:50

Total Metals - EPA Method 6020B

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

Initial and continuing calibrations including interference checks were within method requirements for reported elements.

The method blank(s) contained manganese. Samples that contain manganese have been flagged with a "B" qualifier.

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



Cooler Receipt Form

ARI Client: SPU

Project Name: South Park Landfill

COC No(s): _____ (NA)

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

Assigned ARI Job No: 26D0625

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) Time 1546 3.8

Temp Gun ID#: 9708

Was a temperature blank included in the cooler? _____

YES (NO)

Were coolers received between 0° - 6° (°C) _____

(YES) NO

Was an attempt made to cool the samples? _____

NA (YES) NO

Cooler Accepted by: SA Date: 4/29/26 Time: 1546

Complete custody forms and attach all shipping documents

Log-In Phase:

What kind of packing material was used? _____

Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block N/A Other: _____

Are any samples that were out of temperature compliance documented in LIMS? _____

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 (4/30)

Were the sample(s) split by ARI? (NA)

YES

Date/Time: _____

Equipment: _____

Split by: _____

Samples Logged by: SS Date: 4-29-26 Time: 16:08 Labels checked by: SS

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

Additional Notes, Discrepancies, & Resolutions:

* Sample 26D0625-02 B was empty ^{SS 4/30} upon arrival.

Left container off of work order.

By: SS

Date: 4-30-26



WORK ORDER

26D0625

Client: Seattle Public Utilities

Project Manager: Kelly Bottem

Project: South Park Landfill - Parametrix Water

Project Number: 553-155-067

Preservation Confirmation

Container ID	Container Type	pH	pH Paper Lot#: N000119
26D0625-01 A	HDPE NM, 250mL HNO3	L2 p	
26D0625-01 B	VOA Vial, Clear, 40 mL, HCL		
26D0625-01 C	VOA Vial, Clear, 40 mL, HCL		
26D0625-01 D	VOA Vial, Clear, 40 mL, HCL		
26D0625-01 E	VOA Vial, Clear, 40 mL		
26D0625-01 F	VOA Vial, Clear, 40 mL		
26D0625-01 G	VOA Vial, Clear, 40 mL		
26D0625-02 A	HDPE NM, 250mL HNO3	L2 p	
26D0625-02 B	VOA Vial, Clear, 40 mL, HCL ss 4/29		
26D0625-02 C	VOA Vial, Clear, 40 mL, HCL		
26D0625-02 D	VOA Vial, Clear, 40 mL, HCL		
26D0625-02 E	VOA Vial, Clear, 40 mL		
26D0625-02 F	VOA Vial, Clear, 40 mL		
26D0625-02 G	VOA Vial, Clear, 40 mL		
26D0625-03 A	HDPE NM, 250mL HNO3	L2 p	
26D0625-03 B	VOA Vial, Clear, 40 mL, HCL		
26D0625-03 C	VOA Vial, Clear, 40 mL, HCL		
26D0625-03 D	VOA Vial, Clear, 40 mL, HCL		
26D0625-03 E	VOA Vial, Clear, 40 mL		
26D0625-03 F	VOA Vial, Clear, 40 mL		
26D0625-03 G	VOA Vial, Clear, 40 mL		
26D0625-04 A	HDPE NM, 250mL HNO3	L2 p	
26D0625-04 B	VOA Vial, Clear, 40 mL, HCL		
26D0625-04 C	VOA Vial, Clear, 40 mL, HCL		
26D0625-04 D	VOA Vial, Clear, 40 mL, HCL		
26D0625-04 E	VOA Vial, Clear, 40 mL		
26D0625-04 F	VOA Vial, Clear, 40 mL		
26D0625-04 G	VOA Vial, Clear, 40 mL		
26D0625-05 A	HDPE NM, 250mL HNO3	L2 p	
26D0625-05 B	VOA Vial, Clear, 40 mL, HCL		
26D0625-05 C	VOA Vial, Clear, 40 mL, HCL		
26D0625-05 D	VOA Vial, Clear, 40 mL, HCL		



WORK ORDER

26D0625

Client: Seattle Public Utilities

Project Manager: Kelly Bottem

Project: South Park Landfill - Parametrix Water

Project Number: 553-155-067

26D0625-05 E VOA Vial, Clear, 40 mL

26D0625-05 F VOA Vial, Clear, 40 mL

26D0625-05 G VOA Vial, Clear, 40 mL

26D0625-06 A HDPE NM, 250mL HNO₃

C2P

26D0625-06 B VOA Vial, Clear, 40 mL, HCL

26D0625-06 C VOA Vial, Clear, 40 mL, HCL

26D0625-06 D VOA Vial, Clear, 40 mL, HCL

26D0625-06 E VOA Vial, Clear, 40 mL

26D0625-06 F VOA Vial, Clear, 40 mL

26D0625-06 G VOA Vial, Clear, 40 mL

26D0625-07 A VOA Vial, Clear, 40 mL, HCL

26D0625-07 B VOA Vial, Clear, 40 mL, HCL

26D0625-07 C VOA Vial, Clear, 40 mL

26D0625-07 D VOA Vial, Clear, 40 mL

SS

Preservation Confirmed By

4-29-26

Date



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: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW08-0426
26D0625-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 04/29/2026 09:55

Instrument: NT20 Analyst: FCL

Analyzed: 04/29/2026 19:56

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0625-01 B

Preparation Batch: BOD0619

Sample Size: 10 mL

Prepared: 04/29/2026

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
Surrogate: 1,2-Dichloroethane-d4			80-129 %	99.2	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW08-0426
26D0625-01 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/29/2026 09:55

Instrument: NT16 Analyst: LTN

Analyzed: 05/01/2026 09:52

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0625-01 E

Preparation Batch: BOE0004

Sample Size: 10 mL

Prepared: 05/01/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0465	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	108	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW08-0426
26D0625-01 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/29/2026 09:55

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 17:37

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0625-01 A

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.720	12.9	mg/L	D
Manganese	7439-96-5	20	0.0200	0.971	mg/L	D, B



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW27-0426
26D0625-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/29/2026 10:55
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 20:19
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0625-02 C

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	99.4	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW27-0426
26D0625-02 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/29/2026 10:55

Instrument: NT16 Analyst: LTN

Analyzed: 05/01/2026 10:13

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0625-02 E

Preparation Batch: BOE0004

Sample Size: 10 mL

Prepared: 05/01/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0414	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	109	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW27-0426
26D0625-02 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/29/2026 10:55

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 17:40

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0625-02 A

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.720	5.68	mg/L	D
Manganese	7439-96-5	20	0.0200	0.279	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW31-0426
26D0625-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/29/2026 12:35
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 20:42
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0625-03 B

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.38	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	100	%	



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Reported:
17-Jun-2026 10:50

SPL-GW-MW31-0426
26D0625-03 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/29/2026 12:35

Instrument: NT16 Analyst: LTN

Analyzed: 05/01/2026 10:34

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0625-03 E

Preparation Batch: BOE0004

Sample Size: 10 mL

Prepared: 05/01/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.789	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	111	%	



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Reported:
17-Jun-2026 10:50

SPL-GW-MW31-0426
26D0625-03 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/29/2026 12:35

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 17:43

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0625-03 A

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	20	0.720	19.8	mg/L	D
Manganese	7439-96-5	20	0.0200	0.883	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW30-0426
26D0625-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/29/2026 13:20
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 21:06
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0625-04 B

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.34	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	96.8	%	



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Reported:
17-Jun-2026 10:50

SPL-GW-MW30-0426
26D0625-04 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/29/2026 13:20

Instrument: NT16 Analyst: LTN

Analyzed: 05/01/2026 10:55

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0625-04 E

Preparation Batch: BOE0004

Sample Size: 10 mL

Prepared: 05/01/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0372	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	110	%	



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Reported:
17-Jun-2026 10:50

SPL-GW-MW30-0426
26D0625-04 (Water)

Metals and Metallic Compounds

Method: EPA 6020B	Sampled: 04/29/2026 13:20
Instrument: ICPMS1 Analyst: MRL	Analyzed: 05/04/2026 17:46
Sample Preparation:	Preparation Method: REN - EPA 3010A M
	Preparation Batch: BOD0636
	Prepared: 04/30/2026
	Sample Size: 25 mL
	Final Volume: 25 mL
	Extract ID: 26D0625-04 A

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	5	0.180	2.92	mg/L	D
Manganese	7439-96-5	5	0.00500	0.0904	mg/L	D, B



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW24-0426
26D0625-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/29/2026 14:30
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 21:29
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0625-05 B

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	94.5	%	



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW24-0426
26D0625-05 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/29/2026 14:30

Instrument: NT16 Analyst: LTN

Analyzed: 05/01/2026 11:16

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0625-05 E

Preparation Batch: BOE0004

Sample Size: 10 mL

Prepared: 05/01/2026

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	0.0200	0.0247	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	112	%	



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Reported:
17-Jun-2026 10:50

SPL-GW-MW24-0426
26D0625-05 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/29/2026 14:30

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 17:05

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0625-05 A

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	50	1.80	24.6	mg/L	D
Manganese	7439-96-5	50	0.0500	1.63	mg/L	D, B



Seattle Public Utilities
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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW26-0426
26D0625-06 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/29/2026 15:20
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 21:53
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0625-06 B

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	0.43	ug/L	
Surrogate: 1,2-Dichloroethane-d4			80-129 %	94.6	%	



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Project: South Park Landfill -Parametrix Water
Project Number: 553-155-067
Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

SPL-GW-MW26-0426
26D0625-06 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/29/2026 15:20

Instrument: NT16 Analyst: LTN

Analyzed: 05/01/2026 11:37

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0625-06 E

Preparation Batch: BOE0004

Sample Size: 10 mL

Prepared: 05/01/2026

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
Surrogate: 1,2-Dichloroethane-d4			80-129 %	113	%	



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Reported:
17-Jun-2026 10:50

SPL-GW-MW26-0426
26D0625-06 (Water)

Metals and Metallic Compounds

Method: EPA 6020B

Sampled: 04/29/2026 15:20

Instrument: ICPMS1 Analyst: MRL

Analyzed: 05/04/2026 18:08

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 26D0625-06 A

Preparation Batch: BOD0636

Sample Size: 25 mL

Prepared: 04/30/2026

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Iron	7439-89-6	5	0.180	4.42	mg/L	D
Manganese	7439-96-5	5	0.00500	0.0539	mg/L	D, B



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Reported:
17-Jun-2026 10:50

SPL-GW-MW82-0426
26D0625-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D	Sampled: 04/29/2026 09:55
Instrument: NT20 Analyst: FCL	Analyzed: 04/29/2026 19:33
Sample Preparation:	Preparation Method: EPA 5030C (Purge and Trap)
	Preparation Batch: BOD0619
	Sample Size: 10 mL
	Prepared: 04/29/2026
	Final Volume: 10 mL
	Extract ID: 26D0625-07 B

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	101	%	



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Reported:
17-Jun-2026 10:50

SPL-GW-MW82-0426
26D0625-07 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM

Sampled: 04/29/2026 09:55

Instrument: NT16 Analyst: LTN

Analyzed: 05/01/2026 09:31

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 26D0625-07 C

Preparation Batch: BOE0004

Sample Size: 10 mL

Prepared: 05/01/2026

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
Surrogate: 1,2-Dichloroethane-d4			80-129 %	106	%	



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Reported:
17-Jun-2026 10:50

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BOD0619 - EPA 8260D in Water

Instrument: NT20 Analyst: FCL

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BOD0619-BLK1)		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 13:58							
cis-1,2-Dichloroethene	ND	0.20	ug/L						U
Surrogate: 1,2-Dichloroethane-d4	4.95		ug/L	5.00		98.9 80-129			
LCS (BOD0619-BS1)		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 13:11							
cis-1,2-Dichloroethene	10.2	0.20	ug/L	10.0		102 80-121			
Surrogate: 1,2-Dichloroethane-d4	4.81		ug/L	5.00		96.1 80-129			
LCS Dup (BOD0619-BSD1)		Prepared: 29-Apr-2026 Analyzed: 29-Apr-2026 14:21							
cis-1,2-Dichloroethene	10.2	0.20	ug/L	10.0		102 80-121	0.46	30	
Surrogate: 1,2-Dichloroethane-d4	4.82		ug/L	5.00		96.4 80-129			



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Project Manager: Min-Soon Yim

Reported:
17-Jun-2026 10:50

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - SIM - Quality Control

Batch BOE0004 - EPA 8260D-SIM in Water

Instrument: NT16 Analyst: LTN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BOE0004-BLK1) Prepared: 01-May-2026 Analyzed: 01-May-2026 08:23									
Vinyl chloride	ND	0.0200	ug/L						U
Surrogate: 1,2-Dichloroethane-d4	5280		ug/L	5000		106 80-129			
LCS (BOE0004-BS1) Prepared: 01-May-2026 Analyzed: 01-May-2026 07:41									
Vinyl chloride	1.61	0.0200	ug/L	2.00		80.4 62-141			
Surrogate: 1,2-Dichloroethane-d4	5350		ug/L	5000		107 80-129			
LCS Dup (BOE0004-BSD1) Prepared: 01-May-2026 Analyzed: 01-May-2026 08:02									
Vinyl chloride	1.77	0.0200	ug/L	2.00		88.6 62-141	9.69	30	
Surrogate: 1,2-Dichloroethane-d4	5420		ug/L	5000		108 80-129			



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Reported:
17-Jun-2026 10:50

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BOD0636 - EPA 6020B in Water

Instrument: ICPMS1 Analyst: HAL

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BOD0636-BLK1)			Prepared: 30-Apr-2026 Analyzed: 30-Apr-2026 17:14							
Manganese	55	ND	0.00100	mg/L						U
Blank (BOD0636-BLK3)			Prepared: 30-Apr-2026 Analyzed: 04-May-2026 18:02							
Iron	54	ND	0.0360	mg/L						U
LCS (BOD0636-BS1)			Prepared: 30-Apr-2026 Analyzed: 30-Apr-2026 17:18							
Manganese	55	0.0268	0.00100	mg/L	0.0250		107 80-120			B
LCS (BOD0636-BS3)			Prepared: 30-Apr-2026 Analyzed: 04-May-2026 18:05							
Iron	54	5.31	0.0360	mg/L	5.00		106 80-120			



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Reported:
17-Jun-2026 10:50

Uncertified Analytes included in this Report

Analysis Matrix & Analyte

None

Certified Analyses included in this Report

Analysis Matrix & Analyte

Certification Codes

EPA 6020B in Water

Iron-54 NELAP,DoD-ELAP,WADOE

Manganese-55 NELAP,DoD-ELAP,WADOE

EPA 8260D in Water

cis-1,2-Dichloroethene ADEC,NELAP,WADOE,DoD-ELAP

EPA 8260D-SIM in Water

Vinyl chloride NELAP,WADOE

Certifications

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	02/28/2027
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	01/31/2027
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-018	05/12/2027
WADOE	WA Dept of Ecology	C558	06/30/2026



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Reported:

17-Jun-2026 10:50

Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution.
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.
!	Indicates that ARL is NOT ACCREDITED for this parameter in samples logged as 'Drinking Water'
#	Indicates that ARL is NOT ACCREDITED for this parameter in this analysis and matrix.