



SPS TECHNOLOGIES - ABINGTON PA DAILY SURFACE WATER AND OUTFALL SAMPLING RESULTS REPORT FOR MARCH 24, 2025

PREPARED FOR:
SPS TECHNOLOGIES

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MARCH 27, 2025

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1.0 EXECUTIVE SUMMARY

TRC Environmental Corporation, on behalf of SPS Technologies Abington PA (SPS), collected five surface water samples and three outfall samples in accordance with WSP USA Inc. Surface Water and Outfall Sampling Plan revised on March 5, 2025 (Sampling Plan). The samples were collected on March 24, 2025 and submitted to a Pennsylvania-certified analytical laboratory for analysis. The sample locations are shown in the attached **Figures 1** and **2** and the results of the analysis are shown below.

Surface Water		Upstream Offsite SW Sample Location 1	Upstream Offsite SW Sample Location 2	SW Sample Location 3	SW Sample Location 3 (Duplicate)	High School Road Sample Location 4	Downstream SW Sample Location 5
Parameter	Units	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds							
Toluene	mg/L	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	mg/L	ND	ND	ND	ND	ND	ND
General Chemistry							
Chromium, Trivalent	mg/L	ND	ND	ND	ND	ND	ND
Chromium, Hexavalent	mg/L	ND	0.006 J	0.004 J	ND	ND	ND
Total Cyanide	mg/L	0.003 J	0.002 J	0.002 J	0.002 J	ND	ND
Free Cyanide	mg/L	0.005 J	0.006 J	0.008 J	0.008 J	ND	0.004 J
Oil & Grease	mg/L	ND	ND	ND	ND	ND	ND
Total Metals							
Total Chromium	mg/L	0.00103	0.00162	0.00168	0.00209	0.00057 J	0.00045 J
Total Nickel	mg/L	0.00176 J	0.00138 J	0.00149 J	0.00151 J	0.00182 J	0.00130 J
Dissolved Metals							
Dissolved Chromium	mg/L	0.0003 J	0.0007 J	0.0006 J	0.0004 J	ND	ND
Dissolved Nickel	mg/L	0.00190 J	0.0015 J	0.0012 J	0.0013 J	0.0021	0.0013 J
Total Hardness							
Hardness	mg/L	139.2	141.2	126.5	105.1	185.2	170.3
Field Parameters							
pH	SU	7.59	7.51	7.39	7.39	7.32	7.06

Outfall		Outfall 002	Outfall 006	Outfall 006 (Duplicate)	Outfall 009
Parameter	Units	Result	Result	Result	Result
Volatile Organic Compounds					
Toluene	mg/L	ND	ND	ND	ND
2-Butanone (MEK)	mg/L	0.0011 J	ND	ND	ND
General Chemistry					
Chromium, Trivalent	mg/L	ND	ND	ND	0.018
Chromium, Hexavalent	mg/L	0.004 J	ND	0.003 J	ND
Total Cyanide	mg/L	ND	0.004 J	0.003 J	0.006
Free Cyanide	mg/L	0.006 J	0.004 J	ND	0.005 J
Oil & Grease	mg/L	ND	ND	ND	5.6
Total Suspended Solids	mg/L	17 J	13 J	14 J	240 J
Nitrate/Nitrite as Nitrogen	mg/L	0.54	1.3	1.4	0.42
Chemical Oxygen Demand	mg/L	67 J+	39 J+	32 J+	100 J+
Total Metals					
Total Aluminum	mg/L	0.2310	0.3760	0.3951	2.845
Total Chromium	mg/L	0.00121	0.00216	0.00226	0.01809
Total Copper	mg/L	0.01742	0.00721	0.00737	0.05352
Total Iron	mg/L	0.1268	0.6160	0.6356	5.300
Total Lead	mg/L	0.00086 J	0.00269	0.00290	0.07608
Total Nickel	mg/L	0.00269	0.00150 J	0.00155 J	0.01194
Total Zinc	mg/L	0.1325	0.03570	0.03714	0.3662
Dissolved Metals					
Dissolved Chromium	mg/L	ND	0.0005 J	0.0005 J	0.0006 J
Dissolved Nickel	mg/L	0.0015 J	0.0010 J	0.0010 J	0.0012 J
Total Hardness					
Hardness	mg/L	33.73	66.17	67.07	71.62
Field Parameters					
pH	SU	5.56	6.85	6.85	6.47

A detailed description of the sampling procedure, results, and data evaluation are included in this Sampling Report. The laboratory data validation reports and the complete laboratory analytical reports, including Quality Assurance/Quality Control (QA/QC) are attached.

2.0 INTRODUCTION

This Daily Surface Water and Outfall Sampling Results Report for March 24, 2025 (Sampling Report) was prepared by TRC Environmental Corporation, Inc., (TRC) on behalf of SPS Technologies Abington PA (SPS). The SPS facility is located at 301 Highland Avenue, Jenkintown, PA 19046 (Site). This Sampling Report was prepared to provide the off-Site surface water and outfall sampling results from March 24, 2025, which were collected in accordance with WSP USA Inc. Surface Water and Outfall Sampling Plan revised on March 5, 2025.

2.1 Background

The Site is currently owned by SPS Technologies. On February 17, 2025, a fire broke out at the facility causing major damage and a cessation of operation. Prior to the fire, facility operations consisted of manufacturing of bolts, nuts, screws, rivets, washers, furniture, and fixtures.

3.0 OFF-SITE SURFACE WATER INVESTIGATION

TRC collected five surface water samples at the approved upstream and downstream sampling locations along the Tookany and Tacony Creeks on March 24, 2025. The locations are located northeast and west from the facility, and downstream from the conjoined stream south from the facility. TRC collected three outfall samples during this event as a result of the precipitation on March 24, 2025.

3.1 Surface Water and Outfall Sampling Methodology

TRC collected the surface water and outfall samples in accordance with the Sampling Plan. Field data collected from each location during the sampling include:

- Water depth
- Weather conditions
- Physical characteristics (clarity, appearance, odor)
- Water Quality (DO, pH, OPR, turbidity, conductivity, and temperature)
- Water velocity (visibly moving)
- Additional observations (e.g. wildlife sightings)

The field data is documented in the daily field sampling forms included as **Appendix A**, except for the in-field pH measurement, which is summarized in **Table 1** for surface water samples and in **Table 2** for outfall samples.

3.2 Surface Water and Outfall Sampling

All samples were submitted to Pace Analytical in Westborough, Massachusetts (Certification No. 68-03671) and Pace Analytical in Mansfield, Massachusetts (Certification No. 68-02089), following chain-of-custody protocols.

3.3 Surface Water Sampling Results

Surface water samples were collected from the five approved locations in accordance with Sampling Plan for the following parameters:

- Oil & Grease
- Free Cyanide
- Total Cyanide
- Total Nickel
- Dissolved Nickel
- Total Chromium
- Dissolved Chromium
- Hexavalent Chromium (calculated for Trivalent Chromium)
- Methyl ethyl ketone (2-Butanone)
- Toluene
- Total Hardness

The validated analytical results from surface water sampling are summarized in **Table 1**. The sampling locations are shown on **Figures 1 and 2**.

Outfall samples were collected from three approved locations in accordance with Sampling Plan for the following parameters:

- Chemical Oxygen Demand
- Total Suspended Solids
- Nitrate-Nitrite as N
- Hexavalent Chromium (calculated for Trivalent Chromium)
- Total Aluminum
- Total Copper
- Total Iron
- Total Lead
- Total Zinc
- Oil & Grease
- Free Cyanide
- Total Cyanide
- Total Nickel
- Dissolved Nickel
- Total Chromium
- Dissolved Chromium
- Methyl ethyl ketone (2-Butanone)
- Toluene
- Hardness

The validated analytical results from outfall sampling are summarized in **Table 2**. The sampling locations are shown on **Figure 1**.

4.0 DATA QUALITY ASSURANCE/QUALITY CONTROL MANAGEMENT

4.1 Field Quality Assurance/Quality Control Requirements.

Field personnel performed data quality control (QC) verification of field measurements. This process includes equipment calibration, reviewing calibration records, and duplicate readings to ensure data accuracy. Field measurements were documented in the field information forms included as **Appendix A** and pH readings are summarized in **Table 1** and **Table 2**.

All hand equipment used during the sampling event was cleaned with Alconox and distilled water. Disposable equipment was used for sample collection and processing as appropriate. Field personnel wore disposable nitrile sampling gloves during sampling activities. Sampling gloves were discarded following collection at each sample location and replaced before handling decontaminated equipment or work surfaces.

4.2 Analytical QA/QC Samples

All quality assurance and quality control (QA/QC), field duplicates and matrix spikes/matrix spike duplicates (MS/MSD) were collected in accordance with the Sampling Plan at a rate of 1 per 20 samples per day. A trip blank was included daily for volatile organic compounds (VOCs). A field blank was not collected because single-use disposable ladles were used to collect samples.

4.3 Data Evaluation

The reliability of the analytical data was evaluated to assess its suitability for use in off-Site surface water monitoring. In particular, the data's precision, accuracy, and sensitivity were evaluated based on field sampling documentation, adherence to sample holding times, and analysis of the QC samples (duplicates, spikes, and blanks). Data validation was performed in accordance with the Sampling Plan. The data validation reports are included as **Appendix B**. The laboratory analytical reports are included as **Appendix C**.

4.4 References



- SPS Technologies Sampling Plan, revised on March 5, 2025



<div><div>SOURCE</div><div>NEARMAP IMAGERY, JUNE 16, 2024.</div><div>LEGEND</div><div>SW = SURFACE WATER</div><div><div><div></div></div> SURFACE WATER SAMPLE LOCATION</div><div><div><div></div></div> APPROXIMATE OUTFALL SAMPLE LOCATION</div></div>	<div><div><div>wsp</div></div><div>WSP USA Inc. 751 Arbor Way, Suite 180 Blue Bell, PA 19422</div><div>PROJECTION / DATUM: PA83-SF</div><div><div>0150'300'</div><div>SCALE: 1" = 300'</div></div></div> <div><div>Tel. 610-828-8100 www.wsp.com</div><div>PREPARED BY: PJC</div><div>CHECKED BY: KM</div><div>REVIEWED BY: TK</div></div>	CLIENT	PROJECT	PROJECT NO.:		
				US0043268.2150		
				REVISION NO.:		
				0		
				DATE:		
FEBRUARY 2025						
			TITLE	FIGURE NO.:		
				1		
				ON-SITE INVESTIGATION SURFACE WATER AND OUTFALL SAMPLE LOCATIONS		

C:\Users\USPC714485\OneDrive - WSP\0365\Documents\TEMP_SPS\03 SW-Outfall Sampling\Fig 1-2 SW-Outfall Sample Locations.dwg Tue, 25 Feb 2025 - 4:05pm USPC714485 Layout: Fig 2 Off-Site SW Sample Locations



SOURCE GEOMAP IMAGERY, 2025.	 WSP USA Inc. 751 Arbor Way, Suite 180 Blue Bell, PA 19422 Tel. 610-828-8100 www.wsp.com	CLIENT	PROJECT SURFACE WATER AND OUTFALL SAMPLING PLAN	PROJECT NO.: US0043268.2150
				REVISION NO.: 0
LEGEND SW = SURFACE WATER  SURFACE WATER SAMPLE LOCATION	PROJECTION / DATUM: PA83-SF 0 1,500' 3,000' SCALE: 1" = 3,000'	PREPARED BY: PJC CHECKED BY: KM REVIEWED BY: TK	TITLE OFF-SITE INVESTIGATION SURFACE WATER SAMPLE LOCATIONS	DATE: FEBRUARY 2025
				FIGURE NO.: 2

March 2025

Table 1

Surface Water Analytical Results
Daily Surface Water Sampling Results Report SPS Technologies
Jenkintown, Pennsylvania

Project Number: 658978

Sample Location		Upstream Offsite SW Sample Location 1			Upstream Offsite SW Sample Location 2			SW Sample Location 3			SW Sample Location 3 (Duplicate)			High School Road Sample Location 4			Downstream SW Sample Location 5		
Field Sample ID		SW2-032425			SW1-032425			SW3-032425			DUP-032425			SW4-032425			SW5-032425		
Lab Sample ID		L2517219-02			L2517219-01			L2517219-03			L2517219-06			L2517219-04			L2517219-05		
Sampling Date		3/24/2025			3/24/2025			3/24/2025			3/24/2025			3/24/2025			3/24/2025		
Matrix		Water			Water			Water			Water			Water			Water		
Parameter	Units	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Volatile Organic Compounds																			
Toluene	mg/L	ND		0.0010	ND		0.0010	ND		0.0010	ND		0.0010	ND		0.0010	ND		0.0010
2-Butanone (MEK)	mg/L	ND		0.010	ND		0.010	ND		0.010	ND		0.010	ND		0.010	ND		0.010
General Chemistry																			
Chromium, Trivalent	mg/L	ND		0.010	ND		0.010	ND		0.010	ND		0.010	ND		0.010	ND		0.010
Chromium, Hexavalent	mg/L	ND		0.010	0.006	J	0.010	0.004	J	0.010	ND		0.010	ND		0.010	ND		0.010
Total Cyanide	mg/L	0.003	J	0.005	0.002	J	0.005	0.002	J	0.005	0.002	J	0.005	ND		0.005	ND		0.005
Free Cyanide	mg/L	0.005	J	0.010	0.006	J	0.010	0.008	J	0.010	0.008	J	0.010	ND		0.010	0.004	J	0.010
Oil & Grease	mg/L	ND		4.4	ND		4.0	ND		4.0	ND		4.0	ND		4.4	ND		4.0
Total Metals																			
Total Chromium	mg/L	0.00103		0.00100	0.00162		0.00100	0.00168		0.00100	0.00209		0.00100	0.00057	J	0.00100	0.00045	J	0.00100
Total Nickel	mg/L	0.00176	J	0.00200	0.00138	J	0.00200	0.00149	J	0.00200	0.00151	J	0.00200	0.00182	J	0.00200	0.00130	J	0.00200
Dissolved Metals																			
Dissolved Chromium	mg/L	0.0003	J	0.0010	0.0007	J	0.0010	0.0006	J	0.0010	0.0004	J	0.0010	ND		0.0010	ND		0.0010
Dissolved Nickel	mg/L	0.00190	J	0.0020	0.0015	J	0.0020	0.0012	J	0.0020	0.0013	J	0.0020	0.0021		0.0020	0.0013	J	0.0020
Total Hardness																			
Hardness	mg/L	139.2		0.5400	141.2		0.5400	126.5		0.5400	105.1		0.5400	185.2		0.5400	170.3		0.5400
Field Parameters																			
pH ¹	SU	7.59			7.51			7.39			7.39			7.32			7.06		

Notes:

1.) Field measurements for pH were performed by TRC field personnel prior to sample collection using a Horiba U-52. Field measurements were not validated.

Abbreviations:

mg/L: milligrams per liter

ND: Non-Detect

Q: Qualifier

RL: Reporting Limit

SU: Standard Units

Qualifiers:

J: Estimated Result

Created By: JM 3/26/2025 Checked By: MO 3/27/2025

March 2025

Table 2

Surface Water Analytical Results
Outfall Sampling Results Report SPS Technologies
Jenkintown, Pennsylvania

Project Number: 658978

Sample Location		Outfall 002			Outfall 006			Outfall 006 (Duplicate)			Outfall 009		
Field Sample ID		OF002-032425			OF006-032425			DUP-032425			OF009-032425		
Lab Sample ID		L2517218-01			L2517218-02			L2517218-04			L2517218-03		
Sampling Date		3/24/2025			3/24/2025			3/24/2025			3/24/2025		
Matrix		Water			Water			Water			Water		
Parameter	Units	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Volatile Organic Compounds													
Toluene	mg/L	ND		0.0010	ND		0.0010	ND		0.0010	ND		0.0010
2-Butanone (MEK)	mg/L	0.0011	J	0.010	ND		0.010	ND		0.010	ND		0.010
General Chemistry													
Chromium, Trivalent	mg/L	ND		0.010	ND		0.010	ND		0.010	0.018		0.010
Chromium, Hexavalent	mg/L	0.004	J	0.010	ND		0.010	0.003	J	0.010	ND		0.010
Total Cyanide	mg/L	ND		0.005	0.004	J	0.005	0.003	J	0.005	0.006		0.005
Free Cyanide	mg/L	0.006	J	0.010	0.004	J	0.010	ND		0.010	0.005	J	0.010
Oil & Grease	mg/L	ND		4.0	ND		4.0	ND		4.0	5.6		4.0
Total Suspended Solids	mg/L	17	J	5.0	13	J	5.0	14	J	5.5	240	J	12
Nitrate/Nitrite as Nitrogen	mg/L	0.54		0.10	1.3		0.10	1.4		0.10	0.42		0.10
Chemical Oxygen Demand	mg/L	67	J+	20	39	J+	20	32	J+	20	100	J+	20
Total Metals													
Total Aluminum	mg/L	0.2310		0.01000	0.3760		0.01000	0.3951		0.01000	2.845		0.01000
Total Chromium	mg/L	0.00121		0.00100	0.00216		0.00100	0.00226		0.00100	0.01809		0.00100
Total Copper	mg/L	0.01742		0.00100	0.00721		0.00100	0.00737		0.00100	0.05352		0.00100
Total Iron	mg/L	0.1268		0.05000	0.6160		0.05000	0.6356		0.05000	5.300		0.05000
Total Lead	mg/L	0.00086	J	0.00100	0.00269		0.00100	0.00290		0.00100	0.07608		0.00100
Total Nickel	mg/L	0.00269		0.00200	0.00150	J	0.00200	0.00155	J	0.00200	0.01194		0.00200
Total Zinc	mg/L	0.1325		0.00500	0.03570		0.00500	0.03714		0.00500	0.3662		0.00500
Dissolved Metals													
Dissolved Chromium	mg/L	ND		0.0010	0.0005	J	0.0010	0.0005	J	0.0010	0.0006	J	0.0010
Dissolved Nickel	mg/L	0.0015	J	0.0020	0.0010	J	0.0020	0.0010	J	0.0020	0.0012	J	0.0020
Total Hardness													
Hardness	mg/L	33.73			66.17		0.5400	67.07		0.5400	71.62		0.5400
Field Parameters													
pH ¹	SU	5.56			6.85			6.85			6.47		

Notes:

1.) Field measurements for pH were performed by TRC field personnel prior to sample collection using a Horiba U-52. Field measurements were not validated.

Abbreviations:

mg/L: milligrams per liter

ND: Non-Detect

Q: Qualifier

RL: Reporting Limit

SU: Standard Units

Qualifiers:

J - Estimated Result

J+ - Estimated Result, Potential High Bias

Created By: JM 3/27/2025 Checked By: MO 3/27/2025

Date 3/24/25Project Number: 658978

SURFACE WATER/OUTFALL SAMPLE FIELD INFORMATION FORM

Site SPS
 Location 3300000, PA
 Project Number 658978
 Water Quality Meter Hanna U-50 SN V110312X
 Meter Calibrated @ 3/24/25 @ 0830
 Flow Meter OTT MF 980 SN 2557 337466
 Sampling Date/Time: SW5 @ 1230 SW4 @ 1320 SW1 @ 1920
SW2 @ 1445 SW3 @ 1515
 Sampler(s) Amber Fairman, Chris Graham, Michelle Calmon
 Sampling Device Telescoping dipper pole
 Sample Characteristics: clear, no odor
 Analytical Parameters

Additional Notes:

SW5 - collect HS/MSD
SW5 - velocity measured via timing
filling cylinder, issues with flow
meter, not turning on.
SW3 - collect dup-032425 (1260)
utilized single use disposable
sampling method (cups) so no
field blanks were collected.
received new flow meter @ 1330

Weather Conditions: rain H 52 L 41 wind 8 mph NE

SAMPLE / STATION	STATION DESCRIPTION (stream/lake/river)	DATE	TIME	TOTAL DEPTH	SAMPLE DEPTH	WATER TEMP	SALINITY	PH	COND	ORP	TURBIDITY	DO	VELOCITY
		MM/DD/YY	hr:min	inches		Celsius	ppt	SW	mc/cm	mv	NTU	mg/L	ft/min
SW5-032425	creek	3/24/25	12:30	17.5	8.75	9.03	0.3	7.06	0.722	279	21.3	7.98	420.4m/sec
	Sample Characteristics:												
SW4-032425	creek	3/24/25	13:20	53	26.5	10.01	0.4	7.32	0.855	275	22.1	8.80	0.025
	Sample Characteristics:												
SW1-032425	creek	3/24/25	14:20	9	4.5	10.24	0.3	7.51	0.656	260	33.5	8.74	0.737
	Sample Characteristics:												
SW2-032425	creek	3/24/25	14:45	16.5	8.25	9.61	0.4	7.54	0.736	255	34.4	8.67	0.865
	Sample Characteristics:												
SW3-032425	creek	3/24/25	15:15	47	23.5	9.98	0.2	7.39	0.497	265	35.6	6.21	0.196
	Sample Characteristics:												
	Sample Characteristics:												

One 3124125

Project Number 658978

SURFACE WATER/OUTFALL SAMPLE FIELD INFORMATION FORM

Site SBS
Location Wilmington, PA
Project Number 150475
Water Quality Month March 4-5 2/11 4110312X
Interval Calculated @ 3174125 @ 0830
Flow Meter 055 MPR0 2/11 336387
Sampling Date/Time 05/2 @ 0900 05/9 @ 1015
05/6 @ 1100
Sampler(s) Andy Fairman, Chris Graham, Michelle Gorman
Sampling Device Intelligence dipper pole / cup
Sample Characteristics _____
Analytical Parameters _____

Additional Note:

OF9 - collect MS/MSA
 OF2 - velocity measured via timing
 Pilling cylinder. Flow meter could
 not detect event.
 OF6 - collect sup-032425 (0800).
 velocity measured via timing, pilling
 cylinder. Flow meter would not turn on.

Weather Conditions rain H52 L41 wind 8 mph NE

SAMPLE / STATION	STATION DESCRIPTION (stream, lake, river)	DATE	TIME	TOTAL DEPTH	SAMPLE DEPTH	WATER TEMP	Salinity	pH	COND	ORP	DISSOLVED	DO	VELOCITY
		MM/DD/YY	hr:min	inches		Celsius	ppt	SU	mc/cm	mV	mg/L	mg/L	ft/sec
0F2-032425	Outfall	3/24/25	09:00	0.75	0.375	7.65	0.1	9.96	0.213	372	14.6	7.80	156.7 ^m /min-sec
Sample Characteristics: cloudy w/ yellow silt and sand, no odor													
0F9-032425	Outfall	3/24/25	10:15	3	1.5	7.32	0.2	6.47	0.921	309	653	7.63	0.021
Sample Characteristics: green/brown, turbid, no odor													
0F6-032425	Outfall	3/24/25	11:00	5.5	2.75	8.92	0.2	6.85	0.966	277	111	8.68	523.3 ^m /sec
Sample Characteristics: green, no odor													
Sample Characteristics:													
Sample Characteristics:													
Sample Characteristics:													
Sample Characteristics:													
Sample Characteristics:													

Data Validation Report

Site: SPS Technologies, Surface Water Sampling
Laboratory: Pace Analytical, Westborough and Mansfield, MA
SDG No.: L2517219
Parameters: Select Volatile Organic Compounds (VOCs), Select Metals, Hardness, Total Cyanide, Free Cyanide, Oil & Grease, Hexavalent Chromium, Trivalent Chromium
Data Reviewer: Jessica Esser/TRC
Peer Reviewer: Nancy Bergstrom/TRC
Date: March 26, 2025

Samples Reviewed and Evaluation Summary

6 Surface Water Samples: SW1-032425, SW2-032425, SW3-032425, SW4-032425, SW5-032425, DUP-032425¹

1 Trip Blank: TRIP BLANK-SW-032425

¹Field duplicate of SW3-032425

The above-listed samples were collected on March 24, 2025 and were analyzed for one or more of the following parameters.

- Select VOCs (toluene, 2-butanone) using EPA Method 624.1
- Select total and dissolved metals (chromium, nickel) using EPA Method 200.8
- Total hardness (by calculation) using EPA Method 200.8
- Total cyanide using Standard Methods (SM) 4500 CN-CE
- Free cyanide using SM 4500 CN-E (M)
- Oil and grease using EPA Method 1664B
- Hexavalent chromium using SM 3500 CR-B
- Trivalent chromium by calculation

Limited data validation was performed in accordance with *USEPA National Functional Guidelines for Organic Superfund Methods Data Review (EPA-540-R-20-005)*, November 2020 and *USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA-542-R-20-006)*, November 2020, modified for the methodologies utilized.

The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
- Data Completeness
- * • Holding Times and Sample Preservation
- * • Blanks
- * • Surrogate Recoveries (VOCs only)
- * • Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- * • Laboratory Duplicate Results
- * • Laboratory Control Sample (LCS) Results
- * • Field Duplicate Results
- Sample Results and Reported Quantitation Limits (QLs)
- * - All criteria were met.

Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives. Qualification of the data as a result of sampling error was not required. Qualifications applied to the data as a result of analytical error are discussed below.

- Potential uncertainty exists for select metals, hexavalent chromium, total cyanide, and free cyanide results that were below the lowest calibration standard and QL. These results were qualified as estimated (J) by the laboratory in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level 2 data package. It should be noted that the date of collection for the trip blank was listed as 3/21/25 on the chain-of-custody (COC). For purposes of this assessment, it was assumed the date of collection was the same as the associated samples.

Holding Times and Sample Preservation

All holding time and preservation criteria were met for all parameters.

Blanks

Target analytes were not detected in the associated laboratory method blanks. Target VOCs were not detected in the trip blank. A field blank was not submitted with the data set.

Surrogate Recoveries (VOCs only)

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample SW5-032425 for VOCs, total and dissolved metals, hardness, total cyanide, free cyanide, oil and grease, and hexavalent chromium. All criteria were met.

Laboratory Duplicate Results

Laboratory duplicate analyses were performed on sample SW5-032425 for hexavalent chromium, oil & grease, total cyanide and free cyanide. All criteria were met.

LCS Results

All criteria were met for all parameters.

Field Duplicate Results

Samples SW3-032425 and DUP-032425 were submitted as the field duplicate pair with this sample set. The following table summarizes the relative percent differences (RPDs) and/or absolute differences (AbsDs), where applicable, of the detected analytes after validation. The QL was used in the calculation of the AbsD for nondetect (ND) results. All criteria were met.

Analyte	QLs (mg/L)	SW3-032425 (mg/L)	DUP-032425 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Chromium	0.001	0.00168	0.00209	AbsD = 0.00041	None; all criteria were met.
Total Nickel	0.002	0.00149 J	0.00151 J	AbsD = 0.00002	
Hardness	0.54	126.5	105.1	RPD = 18.5	
Dissolved Chromium	0.001	0.0006 J	0.0004 J	AbsD = 0.0002	
Dissolved Nickel	0.002	0.0012 J	0.0013 J	AbsD = 0.0001	
Total Cyanide	0.005	0.002 J	0.002 J	AbsD = 0	
Free Cyanide	0.010	0.008 J	0.008 J	AbsD = 0	
Hexavalent Chromium	0.010	0.004 J	ND	AbsD = 0.006	

Field duplicate criteria are as follows:

- $RPD \leq 30$ when positive results for both samples are $\geq 5 \times QL$
- $AbsD \leq QL$ when one or both results are $< 5 \times QL$

Sample Results and Reported Quantitation Limits

Select metals, hexavalent chromium, total cyanide, and free cyanide results were reported that were below the lowest calibration standard level and QL. These results were qualified as estimated (J) in the associated samples by the laboratory.

Samples SW2-032425 and SW4-032425 were diluted 1.1-fold for oil and grease likely due to sample volume available for analysis. There were no other dilutions performed on the samples in this data set.

The total and dissolved metal results were evaluated during data validation to identify any dissolved concentrations that were significantly higher than the associated total concentration. The evaluation was based on the following criteria to determine significance: percent difference (%D) should be $\leq 20\%$ when dissolved results are greater than total results and both results are $\geq 5 \times$ the QL. If the dissolved result was $>$ the total and one or both results were $< 5 \times$ the QL, then the AbsD should be $\leq 2 \times$ the QL. These criteria were met for all samples.

QUALIFIED FORM 1s

VOLATILES

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-01
 Client ID: SW1-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 14:20
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 13:11
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	79		60-140
Fluorobenzene	74		60-140
4-Bromofluorobenzene	114		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-02
Client ID: SW2-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 14:45
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 13:44
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	80		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	113		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-03
 Client ID: SW3-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 15:15
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 13:43
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	86		60-140
Fluorobenzene	67		60-140
4-Bromofluorobenzene	90		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-04
Client ID: SW4-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 13:20
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 14:17
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	84		60-140
Fluorobenzene	71		60-140
4-Bromofluorobenzene	92		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-05
Client ID: SW5-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 12:30
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 14:17
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	79		60-140
Fluorobenzene	70		60-140
4-Bromofluorobenzene	114		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-06
 Client ID: DUP-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 12:00
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 14:49
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	75		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	117		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-07
Client ID: TRIP BLANK-SW-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/21/25 00:00
Date Received: 03/24/25
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 12:39
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	94		60-140
Fluorobenzene	82		60-140
4-Bromofluorobenzene	110		60-140

METALS

Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-01

Date Collected: 03/24/25 14:20

Client ID: SW1-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00162		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:27	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00138	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:27	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	141.2		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:27	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:27	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0007	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:52	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0015	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:52	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-02

Date Collected: 03/24/25 14:45

Client ID: SW2-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00103		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:31	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00176	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:31	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	139.2		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:31	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:31	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0003	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:56	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.00190	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:56	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-03

Date Collected: 03/24/25 15:15

Client ID: SW3-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00168		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:36	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00149	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:36	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	126.5		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:36	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:36	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0006	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 13:24	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0012	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 13:24	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-04

Date Collected: 03/24/25 13:20

Client ID: SW4-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00057	J	mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:40	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00182	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:40	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	185.2		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:40	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:40	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	ND		mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 13:27	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0021		mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 13:27	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-05

Date Collected: 03/24/25 12:30

Client ID: SW5-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00045	J	mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 11:49	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00130	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 11:49	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	170.3		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 11:49	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 11:49	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	ND		mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 13:12	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0013	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 13:12	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-06

Date Collected: 03/24/25 12:00

Client ID: DUP-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00209		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00151	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	105.1		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:45	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0004	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 13:31	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0013	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 13:31	EPA 3005A	3,200.8	BLR



INORGANICS & MISCELLANEOUS

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-01

Client ID: SW1-032425

Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 14:20

Date Received: 03/24/25

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 13:57	121,4500CN-CE	JER
Cyanide, Free	0.006	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 11:38	140,1664B	TPR
Chromium, Hexavalent	0.006	J	mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:45	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-02
Client ID: SW2-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 14:45
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.003	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:00	121,4500CN-CE	JER
Cyanide, Free	0.005	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.4	4.4	1.1	03/25/25 08:36	03/25/25 11:39	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:46	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-03

Client ID: SW3-032425

Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 15:15

Date Received: 03/24/25

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:01	121,4500CN-CE	JER
Cyanide, Free	0.008	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 11:40	140,1664B	TPR
Chromium, Hexavalent	0.004	J	mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:47	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-04

Client ID: SW4-032425

Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 13:20

Date Received: 03/24/25

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:02	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.4	4.4	1.1	03/25/25 08:36	03/25/25 11:43	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:47	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-05

Client ID: SW5-032425

Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 12:30

Date Received: 03/24/25

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:03	121,4500CN-CE	JER
Cyanide, Free	0.004	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:04	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:48	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-06
Client ID: DUP-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 12:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:07	121,4500CN-CE	JER
Cyanide, Free	0.008	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 11:44	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:54	121,3500CR-B	DMO



Data Validation Report

Site: SPS Technologies, Outfall Sampling
Laboratory: Pace Analytical, Westborough and Mansfield, MA
SDG No.: L2517218
Parameters: Select Volatile Organic Compounds (VOCs), Select Metals, Hardness, Total Suspended Solids (TSS), Total Cyanide, Free Cyanide, Nitrate/Nitrite, Chemical Oxygen Demand (COD), Oil & Grease, Hexavalent Chromium, Trivalent Chromium
Data Reviewer: Jessica Esser/TRC
Peer Reviewer: Nancy Bergstrom/TRC
Date: March 27, 2025

Samples Reviewed and Evaluation Summary

4 Outfall Samples: OF002-032425, OF006-032425, OF009-032425, DUP-032425¹

1 Trip Blank: TB-OF-032425

¹Field duplicate of OF006-032425

The above-listed samples were collected on March 24, 2025 and were analyzed for one or more of the following parameters.

- Select VOCs (toluene, 2-butanone) using EPA Method 624.1
- Select total metals (aluminum, chromium, copper, iron, lead, nickel, zinc) using EPA Method 200.8
- Select dissolved metals (chromium, nickel) using EPA Method 200.8
- Total hardness (by calculation) using EPA Method 200.8
- TSS using Standard Methods (SM) 2540D
- Total cyanide using SM 4500 CN-CE
- Free cyanide using SM 4500 CN-E (M)
- Nitrate/nitrite using EPA Method 353.2
- COD using EPA Method 410.4
- Oil and grease using EPA Method 1664B
- Hexavalent chromium using SM 3500 CR-B
- Trivalent chromium by calculation

Limited data validation was performed in accordance with *USEPA National Functional Guidelines for Organic Superfund Methods Data Review (EPA-540-R-20-005)*, November 2020 and *USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA-542-R-20-006)*, November 2020, modified for the methodologies utilized.

The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
- Data Completeness
- * • Holding Times and Sample Preservation
- Blanks
- * • Surrogate Recoveries (VOCs only)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

- Laboratory Duplicate Results
- * • Laboratory Control Sample (LCS) Results
- * • Field Duplicate Results
- Sample Results and Reported Quantitation Limits (QLs)
- * - All criteria were met.

Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives. Qualification of the data as a result of sampling error was not required. Qualifications applied to the data as a result of analytical error are discussed below.

- Potential uncertainty exists for select VOC, metals, hexavalent chromium, total cyanide and free cyanide results that were below the lowest calibration standard and QL. These results were qualified as estimated (J) by the laboratory in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.
- The positive results for COD in all samples in this data set were qualified as estimated with a potential high bias (J+) due to a high MS recovery (%R). These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.
- The positive results for TSS in all samples in this data set were qualified as estimated (J) due to laboratory duplicate variability. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level 2 data package with the following exceptions/notes.

- The date of collection for the trip blank was listed as 3/23/25 on the chain-of-custody (COC). For purposes of this assessment, it was assumed the date of collection was the same as the associated samples.
- The laboratory performed MS/laboratory duplicate analyses on sample OF009-032425 for nitrate/nitrite and COD rather than MS/MSD analyses as requested on the COC.
- MS/MSD analyses were not performed on sample OF009-032425 for SM 2540D as requested on the COC; a laboratory duplicate analysis was performed instead due to the nature of the analysis.

There is no impact on the data usability due to these issues and no validation actions were taken on this basis.

Holding Times and Sample Preservation

All holding time and preservation criteria were met for all parameters.

Blanks

Target VOCs were not detected in the trip blank. A field blank was not submitted with the data set. With the exception of total aluminum and total copper, target analytes were not detected in the

associated laboratory method blanks. Total aluminum and total copper were detected in the laboratory method blank associated with all samples in this data set at concentrations of 0.00609 J mg/L and 0.00044 J mg/L, respectively. No qualification was required on this basis since the results for total aluminum and total copper in all associated samples were \geq the QL and $\geq 10\times$ the amount detected in the method blank.

Surrogate Recoveries (VOCs only)

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample OF009-032425 for VOCs, total and dissolved metals, hardness, total cyanide, free cyanide, oil and grease, and hexavalent chromium. MS analyses were performed on sample OF009-032425 for nitrate/nitrite and COD. With the exception of COD, all criteria were met. The %R for COD in the MS (114%) performed on sample OF009-032425 was above the laboratory acceptance criteria (90-110%). Therefore, the positive results for COD in all samples in this data set were qualified as estimated with a potential high bias (J+).

Laboratory Duplicate Results

Laboratory duplicate analyses were performed on sample OF009-032425 for hexavalent chromium, TSS, free cyanide, nitrate/nitrite, and COD. With the exception of TSS, all criteria were met. The relative percent difference (RPD) for TSS (67%) in the laboratory duplicate analysis performed on sample OF009-032425 was above the laboratory acceptance criteria (32%). Therefore, the positive results for TSS in all samples in this data set were qualified as estimated (J).

LCS Results

All criteria were met for all parameters.

Field Duplicate Results

Samples OF006-032425 and DUP-032425 were submitted as the field duplicate pair with this sample set. The following table summarizes the relative percent differences (RPDs) and/or absolute differences (AbsDs), where applicable, of the detected analytes after validation. The QL was used in the calculation of the AbsD for nondetect (ND) results. All criteria were met.

Analyte	QLs (mg/L)	OF006-032425 (mg/L)	DUP-032425 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Aluminum	0.010	0.3760	0.3951	RPD = 5.0	None; all criteria were met.
Total Chromium	0.001	0.00216	0.00226	AbsD = 0.0001	
Total Copper	0.001	0.00721	0.00737	RPD = 2.2	
Total Iron	0.050	0.6160	0.6356	RPD = 3.1	
Total Lead	0.001	0.00269	0.00290	AbsD = 0.00021	
Total Nickel	0.002	0.00150 J	0.00155 J	AbsD = 0.00005	
Total Zinc	0.005	0.03570	0.03714	RPD = 4.0	
Hardness	0.54	66.17	67.07	RPD = 1.4	
Dissolved Chromium	0.001	0.0005 J	0.0005 J	AbsD = 0	
Dissolved Nickel	0.002	0.0010 J	0.0010 J	AbsD = 0	

Analyte	QLs (mg/L)	OF006-032425 (mg/L)	DUP-032425 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
TSS	5.0	13	14	AbsD = 1	None; all criteria were met.
Total Cyanide	0.005	0.004 J	0.003 J	AbsD = 0.001	
Free Cyanide	0.010	0.004 J	ND	AbsD = 0.006	
Nitrate/Nitrite	0.10	1.3	1.4	RPD = 7.4	
COD	20	39	32	AbsD = 7	
Hexavalent Chromium	0.010	ND	0.003 J	AbsD = 0.007	

Field duplicate criteria are as follows:

- RPD \leq 30 when positive results for both samples are \geq 5x QL
- AbsD \leq QL when one or both results are $<$ 5x QL

Sample Results and Reported Quantitation Limits

Select VOC, metals, hexavalent chromium, total cyanide, and free cyanide results were reported that were below the lowest calibration standard level and QL. These results were qualified as estimated (J) in the associated samples by the laboratory.

The following table summarizes the dilutions performed on the samples in this data set. The QLs for these samples were elevated accordingly.

Sample ID(s)	Analytes	Dilution Factor(s)	Reason for Dilution
OF009-032425	Toluene, 2-Butanone	4-fold	Dilution was required due to the sample matrix. The case narrative noted that the sample was cloudy and required anti-foam solution during analysis. Toluene and 2-butanone were not detected in sample OF009-032425.
OF009-032425	TSS	2.5-fold	Dilutions were likely due to the concentration or the sample matrix. Dilutions were associated with positive detections above the QL.
DUP-032425		1.1-fold	

The total and dissolved metal results were evaluated during data validation to identify any dissolved concentrations that were significantly higher than the associated total concentration. The evaluation was based on the following criteria to determine significance: percent difference (%D) should be \leq 20% when dissolved results are greater than total results and both results are \geq 5x the QL. If the dissolved result was $>$ the total and one or both results were $<$ 5x the QL, then the AbsD should be \leq 2x the QL. These criteria were met for all samples.

QUALIFIED FORM 1s

VOLATILES

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-01
Client ID: OF002-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 09:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 11:25
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	0.0011	J	mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	87		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	92		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-02
Client ID: OF006-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 11:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 11:59
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	83		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	93		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-03 D
 Client ID: OF009-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 10:15
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 13:08
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0040	0.0012	4
2-Butanone	ND		mg/l	0.040	0.0042	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	82		60-140
Fluorobenzene	71		60-140
4-Bromofluorobenzene	86		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-04
 Client ID: DUP-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 08:00
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 12:34
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	84		60-140
Fluorobenzene	71		60-140
4-Bromofluorobenzene	91		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-05
Client ID: TB-OF-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/23/25 00:00
Date Received: 03/24/25
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 10:51
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	83		60-140
Fluorobenzene	71		60-140
4-Bromofluorobenzene	98		60-140

METALS

Project Name: SPS TECHNOLOGIES**Lab Number:** L2517218**Project Number:** 658978**Report Date:** 03/27/25**SAMPLE RESULTS**

Lab ID: L2517218-01

Date Collected: 03/24/25 09:00

Client ID: OF002-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.2310		mg/l	0.01000	0.00327	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Chromium, Total	0.00121		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Copper, Total	0.01742		mg/l	0.00100	0.00038	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Iron, Total	0.1268		mg/l	0.05000	0.01910	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Lead, Total	0.00086	J	mg/l	0.00100	0.00034	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00269		mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Zinc, Total	0.1325		mg/l	0.00500	0.00341	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	33.73		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB

General Chemistry - Mansfield Lab

Chromium, Trivalent	ND		mg/l	0.010	0.003	1	03/25/25 12:03	NA	107,-	
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Dissolved Metals - Mansfield Lab

Chromium, Dissolved	ND		mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:41	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0015	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:41	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517218**Project Number:** 658978**Report Date:** 03/27/25**SAMPLE RESULTS**

Lab ID: L2517218-02

Date Collected: 03/24/25 11:00

Client ID: OF006-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.3760		mg/l	0.01000	0.00327	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Chromium, Total	0.00216		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Copper, Total	0.00721		mg/l	0.00100	0.00038	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Iron, Total	0.6160		mg/l	0.05000	0.01910	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Lead, Total	0.00269		mg/l	0.00100	0.00034	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00150	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Zinc, Total	0.03570		mg/l	0.00500	0.00341	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	66.17		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB

General Chemistry - Mansfield Lab

Chromium, Trivalent	ND		mg/l	0.010	0.003	1	03/25/25 12:07	NA	107,-	
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Dissolved Metals - Mansfield Lab

Chromium, Dissolved	0.0005	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0010	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517218**Project Number:** 658978**Report Date:** 03/27/25**SAMPLE RESULTS**

Lab ID: L2517218-03

Date Collected: 03/24/25 10:15

Client ID: OF009-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2.845		mg/l	0.01000	0.00327	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Chromium, Total	0.01809		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Copper, Total	0.05352		mg/l	0.00100	0.00038	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Iron, Total	5.300		mg/l	0.05000	0.01910	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Lead, Total	0.07608		mg/l	0.00100	0.00034	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Nickel, Total	0.01194		mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Zinc, Total	0.3662		mg/l	0.00500	0.00341	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	71.62		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB

General Chemistry - Mansfield Lab

Chromium, Trivalent	0.018		mg/l	0.010	0.003	1	03/25/25 11:36	NA	107,-	
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Dissolved Metals - Mansfield Lab

Chromium, Dissolved	0.0006	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:30	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0012	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:30	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517218**Project Number:** 658978**Report Date:** 03/27/25**SAMPLE RESULTS**

Lab ID: L2517218-04

Date Collected: 03/24/25 08:00

Client ID: DUP-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.3951		mg/l	0.01000	0.00327	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Chromium, Total	0.00226		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Copper, Total	0.00737		mg/l	0.00100	0.00038	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Iron, Total	0.6356		mg/l	0.05000	0.01910	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Lead, Total	0.00290		mg/l	0.00100	0.00034	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00155	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Zinc, Total	0.03714		mg/l	0.00500	0.00341	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	67.07		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB

General Chemistry - Mansfield Lab

Chromium, Trivalent	ND		mg/l	0.010	0.003	1	03/25/25 12:22	NA	107,-	
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Dissolved Metals - Mansfield Lab

Chromium, Dissolved	0.0005	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:49	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0010	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:49	EPA 3005A	3,200.8	BLR



INORGANICS & MISCELLANEOUS

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-01
Client ID: OF002-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 09:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	17.	J	mg/l	5.0	NA	1	-	03/25/25 06:59	121,2540D	BAY
Cyanide, Total	ND		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 13:51	121,4500CN-CE	JER
Cyanide, Free	0.006	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Nitrogen, Nitrate/Nitrite	0.54		mg/l	0.10	0.046	1	-	03/25/25 07:14	44,353.2	KAF
Chemical Oxygen Demand	67.	J+	mg/l	20	6.0	1	03/25/25 10:00	03/25/25 13:56	44,410.4	CVN
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:54	140,1664B	TPR
Chromium, Hexavalent	0.004	J	mg/l	0.010	0.003	1	03/25/25 07:05	03/25/25 07:33	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-02
Client ID: OF006-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 11:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	13.	J	mg/l	5.0	NA	1	-	03/25/25 06:59	121,2540D	BAY
Cyanide, Total	0.004	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 13:52	121,4500CN-CE	JER
Cyanide, Free	0.004	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Nitrogen, Nitrate/Nitrite	1.3		mg/l	0.10	0.046	1	-	03/25/25 07:15	44,353.2	KAF
Chemical Oxygen Demand	39.	J+	mg/l	20	6.0	1	03/25/25 10:00	03/25/25 13:56	44,410.4	CVN
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:55	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:05	03/25/25 07:34	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-03
Client ID: OF009-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 10:15
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	240	J	mg/l	12	NA	2.5	-	03/25/25 06:59	121,2540D	BAY
Cyanide, Total	0.006		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 15:32	121,4500CN-CE	JER
Cyanide, Free	0.005	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Nitrogen, Nitrate/Nitrite	0.42		mg/l	0.10	0.046	1	-	03/25/25 07:16	44,353.2	KAF
Chemical Oxygen Demand	100	J+	mg/l	20	6.0	1	03/25/25 10:00	03/25/25 13:57	44,410.4	CVN
Oil & Grease, Hem-Grav	5.6		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:56	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:05	03/25/25 07:35	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-04
Client ID: DUP-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 08:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	14.	J	mg/l	5.5	NA	1.1	-	03/25/25 06:59	121,2540D	BAY
Cyanide, Total	0.003	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 15:33	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Nitrogen, Nitrate/Nitrite	1.4		mg/l	0.10	0.046	1	-	03/25/25 07:23	44,353.2	KAF
Chemical Oxygen Demand	32.	J+	mg/l	20	6.0	1	03/25/25 10:00	03/25/25 13:57	44,410.4	CVN
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:53	140,1664B	TPR
Chromium, Hexavalent	0.003	J	mg/l	0.010	0.003	1	03/25/25 07:05	03/25/25 07:40	121,3500CR-B	DMO





ANALYTICAL REPORT

Lab Number: L2517219

Client: TRC Environmental
1617 JFK Blvd.
Suite 510
Philadelphia, PA 19103

ATTN: Julie Acton

Phone: (215) 563-2122

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Report Date: 03/26/25

The original project report/data package is held by Pace Analytical Services. This report/data package is paginated and should be reproduced only in its entirety. Pace Analytical Services holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2517219-01	SW1-032425	WATER	JENKINTOWN, PA	03/24/25 14:20	03/24/25
L2517219-02	SW2-032425	WATER	JENKINTOWN, PA	03/24/25 14:45	03/24/25
L2517219-03	SW3-032425	WATER	JENKINTOWN, PA	03/24/25 15:15	03/24/25
L2517219-04	SW4-032425	WATER	JENKINTOWN, PA	03/24/25 13:20	03/24/25
L2517219-05	SW5-032425	WATER	JENKINTOWN, PA	03/24/25 12:30	03/24/25
L2517219-06	DUP-032425	WATER	JENKINTOWN, PA	03/24/25 12:00	03/24/25
L2517219-07	TRIP BLANK-SW-032425	WATER	JENKINTOWN, PA	03/21/25 00:00	03/24/25

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Pace Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Pace's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Pace Project Manager and made arrangements for Pace to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

Case Narrative (continued)

Report Submission

March 26, 2025: This final report includes the results of all requested analyses.

March 25, 2025: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative

Date: 03/26/25

ORGANICS

VOLATILES

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-01
Client ID: SW1-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 14:20
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 13:11
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	79		60-140
Fluorobenzene	74		60-140
4-Bromofluorobenzene	114		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-02
 Client ID: SW2-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 14:45
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 13:44
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	80		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	113		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-03
 Client ID: SW3-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 15:15
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 13:43
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	86		60-140
Fluorobenzene	67		60-140
4-Bromofluorobenzene	90		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-04
 Client ID: SW4-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 13:20
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 14:17
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	84		60-140
Fluorobenzene	71		60-140
4-Bromofluorobenzene	92		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-05
 Client ID: SW5-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 12:30
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 14:17
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	79		60-140
Fluorobenzene	70		60-140
4-Bromofluorobenzene	114		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-06
 Client ID: DUP-032425
 Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 12:00
 Date Received: 03/24/25
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 03/25/25 14:49
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	75		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	117		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-07
Client ID: TRIP BLANK-SW-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/21/25 00:00
Date Received: 03/24/25
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 12:39
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	94		60-140
Fluorobenzene	82		60-140
4-Bromofluorobenzene	110		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
 Analytical Date: 03/25/25 09:35
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,05-07 Batch: WG2045058-4					
Toluene	ND		mg/l	0.0010	0.00031
2-Butanone	ND		mg/l	0.010	0.0010

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	83		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	114		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
 Analytical Date: 03/25/25 09:38
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03-04 Batch: WG2045078-4					
Toluene	ND		mg/l	0.0010	0.00031
2-Butanone	ND		mg/l	0.010	0.0010

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	87		60-140
Fluorobenzene	74		60-140
4-Bromofluorobenzene	87		60-140

Lab Control Sample Analysis **Batch Quality Control**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,05-07 Batch: WG2045058-3								
Toluene	110		-		70-130	-		41
2-Butanone	60		-		60-140	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	87				60-140
Fluorobenzene	85				60-140
4-Bromofluorobenzene	115				60-140

Lab Control Sample Analysis **Batch Quality Control**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-04 Batch: WG2045078-3								
Toluene	95		-		70-130	-		41
2-Butanone	76		-		60-140	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	91				60-140
Fluorobenzene	80				60-140
4-Bromofluorobenzene	84				60-140

Matrix Spike Analysis **Batch Quality Control**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,05-07 QC Batch ID: WG2045058-5 WG2045058-6 QC Sample: L2517219-05 Client ID: SW5-032425												
Toluene	ND	0.00002	0.024	120		0.024	120		47-150	0		41
2-Butanone	ND	0.00005	0.031	62		0.034	68		60-140	9		30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
4-Bromofluorobenzene	114		112		60-140
Fluorobenzene	82		83		60-140
Pentafluorobenzene	84		86		60-140

METALS

Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-01

Date Collected: 03/24/25 14:20

Client ID: SW1-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00162		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:27	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00138	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:27	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	141.2		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:27	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:27	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0007	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:52	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0015	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:52	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-02

Date Collected: 03/24/25 14:45

Client ID: SW2-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00103		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:31	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00176	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:31	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	139.2		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:31	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:31	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0003	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:56	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.00190	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:56	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-03

Date Collected: 03/24/25 15:15

Client ID: SW3-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00168		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:36	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00149	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:36	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	126.5		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:36	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:36	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0006	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 13:24	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0012	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 13:24	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-04

Date Collected: 03/24/25 13:20

Client ID: SW4-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00057	J	mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:40	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00182	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:40	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	185.2		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:40	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:40	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	ND		mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 13:27	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0021		mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 13:27	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-05

Date Collected: 03/24/25 12:30

Client ID: SW5-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00045	J	mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 11:49	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00130	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 11:49	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	170.3		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 11:49	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 11:49	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	ND		mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 13:12	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0013	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 13:12	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**SAMPLE RESULTS**

Lab ID: L2517219-06

Date Collected: 03/24/25 12:00

Client ID: DUP-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00209		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00151	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	105.1		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:45	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0004	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 13:31	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0013	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 13:31	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-06 Batch: WG2044700-1										
Chromium, Total	ND		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB
Nickel, Total	ND		mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01-06 Batch: WG2044700-1										
Hardness	ND		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-06 Batch: WG2044702-1										
Chromium, Dissolved	ND		mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:23	3,200.8	BLR
Nickel, Dissolved	ND		mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:23	3,200.8	BLR

Prep Information

Digestion Method: EPA 3005A



Lab Control Sample Analysis **Batch Quality Control**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 Batch: WG2044700-2								
Chromium, Total	99		-		85-115	-		
Nickel, Total	103		-		85-115	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-06 Batch: WG2044700-2								
Hardness	103		-		85-115	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 01-06 Batch: WG2044702-2								
Chromium, Dissolved	94		-		85-115	-		
Nickel, Dissolved	110		-		85-115	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG2044700-3 WG2044700-4 QC Sample: L2517218-03 Client ID: MS Sample												
Chromium, Total	0.01809	0.2	0.2150	98		0.2102	96		70-130	2		20
Nickel, Total	0.01194	0.5	0.5312	104		0.5165	101		70-130	3		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG2044700-3 WG2044700-4 QC Sample: L2517218-03 Client ID: MS Sample												
Hardness	71.62	66.2	140.3	104		137.3	99		70-130	2		20
Total Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG2044700-5 WG2044700-6 QC Sample: L2517219-05 Client ID: SW5-032425												
Chromium, Total	0.00045J	0.2	0.1950	98		0.1967	98		70-130	1		20
Nickel, Total	0.00130J	0.5	0.5209	104		0.5160	103		70-130	1		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG2044700-5 WG2044700-6 QC Sample: L2517219-05 Client ID: SW5-032425												
Hardness	170.3	66.2	236.9	101		235.6	99		70-130	1		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG2044702-3 WG2044702-4 QC Sample: L2517218-03 Client ID: MS Sample												
Chromium, Dissolved	0.0006J	0.2	0.1789	89		0.1757	88		70-130	2		20
Nickel, Dissolved	0.0012J	0.5	0.5250	105		0.5138	103		70-130	2		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG2044702-5 WG2044702-6 QC Sample: L2517219-05 Client ID: SW5-032425												
Chromium, Dissolved	ND	0.2	0.1837	92		0.1767	88		70-130	4		20
Nickel, Dissolved	0.0013J	0.5	0.5281	106		0.4880	98		70-130	8		20

INORGANICS & MISCELLANEOUS

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-01
Client ID: SW1-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 14:20
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 13:57	121,4500CN-CE	JER
Cyanide, Free	0.006	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 11:38	140,1664B	TPR
Chromium, Hexavalent	0.006	J	mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:45	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-02
Client ID: SW2-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 14:45
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.003	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:00	121,4500CN-CE	JER
Cyanide, Free	0.005	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.4	4.4	1.1	03/25/25 08:36	03/25/25 11:39	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:46	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-03

Client ID: SW3-032425

Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 15:15

Date Received: 03/24/25

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:01	121,4500CN-CE	JER
Cyanide, Free	0.008	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 11:40	140,1664B	TPR
Chromium, Hexavalent	0.004	J	mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:47	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-04

Client ID: SW4-032425

Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 13:20

Date Received: 03/24/25

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:02	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.4	4.4	1.1	03/25/25 08:36	03/25/25 11:43	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:47	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-05

Client ID: SW5-032425

Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 12:30

Date Received: 03/24/25

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:03	121,4500CN-CE	JER
Cyanide, Free	0.004	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:04	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:48	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

SAMPLE RESULTS

Lab ID: L2517219-06

Client ID: DUP-032425

Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 12:00

Date Received: 03/24/25

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 14:07	121,4500CN-CE	JER
Cyanide, Free	0.008	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 11:44	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:54	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG2044711-1										
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG2044714-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:10	03/25/25 07:44	121,3500CR-B	DMO
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG2044802-1										
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:10	140,1664B	TPR
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG2044815-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 13:37	121,4500CN-CE	JER



Lab Control Sample Analysis **Batch Quality Control**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG2044711-2								
Cyanide, Free	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG2044714-2								
Chromium, Hexavalent	104		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG2044802-2								
Oil & Grease, Hem-Grav	96		-		78-114	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG2044815-2								
Cyanide, Total	90		-		90-110	-		

Matrix Spike Analysis **Batch Quality Control**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517219

Report Date: 03/26/25

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044711-4 WG2044711-5 QC Sample: L2517219-05 Client ID: SW5-032425												
Cyanide, Free	0.004J	0.25	0.247	99		0.258	103		80-120	4		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044714-4 WG2044714-5 QC Sample: L2517219-05 Client ID: SW5-032425												
Chromium, Hexavalent	ND	0.1	0.102	102		0.102	102		85-115	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044802-4 WG2044802-5 QC Sample: L2517219-05 Client ID: SW5-032425												
Oil & Grease, Hem-Grav	ND	39.2	37	95		36	92		78-114	3		18
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044802-6 WG2044802-7 QC Sample: L2517218-03 Client ID: MS Sample												
Oil & Grease, Hem-Grav	5.6	39.2	37	80		37	80		78-114	0		18
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044815-3 WG2044815-4 QC Sample: L2517218-03 Client ID: MS Sample												
Cyanide, Total	0.006	0.2	0.206	100		0.204	99		90-110	3		30
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044815-5 WG2044815-6 QC Sample: L2517219-05 Client ID: SW5-032425												
Cyanide, Total	ND	0.2	0.198	99		0.200	100		90-110	1		30

Lab Duplicate Analysis

Batch Quality Control

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517219
Report Date: 03/26/25

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044711-3 QC Sample: L2517219-05 Client ID: SW5-032425						
Cyanide, Free	0.004J	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044714-3 QC Sample: L2517219-05 Client ID: SW5-032425						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044802-3 QC Sample: L2517219-05 Client ID: SW5-032425						
Oil & Grease, Hem-Grav	ND	ND	mg/l	NC		18
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2044815-7 QC Sample: L2517219-05 Client ID: SW5-032425						
Cyanide, Total	ND	ND	mg/l	NC		30

Project Name: SPS TECHNOLOGIES**Lab Number:** L2517219**Project Number:** 658978**Report Date:** 03/26/25**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler Custody Seal**

A	Absent
B	Absent
C	Absent
D	Absent
E	Absent
F	Absent
G	Absent
H	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2517219-01A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-01B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-01C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-01D	Plastic 250ml NaOH preserved	D	>12	>12	2.8	Y	Absent		TCN-4500(14)
L2517219-01E	Plastic 250ml HNO3 preserved	D	<2	<2	2.8	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517219-01F	Plastic 250ml HNO3 preserved	D	<2	<2	2.8	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2517219-01G	Plastic 500ml unpreserved	D	7	7	2.8	Y	Absent		HEXCR-3500(1),FCN(1)
L2517219-01H	Amber 1L HCl preserved	D	NA		2.8	Y	Absent		OG-1664(28)
L2517219-01I	Amber 1L HCl preserved	D	NA		2.8	Y	Absent		OG-1664(28)
L2517219-02A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-02B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-02C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-02D	Plastic 250ml NaOH preserved	D	>12	>12	2.8	Y	Absent		TCN-4500(14)
L2517219-02E	Plastic 250ml HNO3 preserved	D	<2	<2	2.8	Y	Absent		CR-2008S(180),NI-2008S(180)

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2517219-02F	Plastic 250ml HNO3 preserved	D	<2	<2	2.8	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2517219-02G	Plastic 500ml unpreserved	D	7	7	2.8	Y	Absent		HEXCR-3500(1),FCN(1)
L2517219-02H	Amber 1L HCl preserved	D	NA		2.8	Y	Absent		OG-1664(28)
L2517219-02I	Amber 1L HCl preserved	D	NA		2.8	Y	Absent		OG-1664(28)
L2517219-03A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-03B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-03C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-03D	Plastic 250ml NaOH preserved	A	>12	>12	2.9	Y	Absent		TCN-4500(14)
L2517219-03E	Plastic 250ml HNO3 preserved	A	<2	<2	2.9	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517219-03F	Plastic 250ml HNO3 preserved	A	<2	<2	2.9	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2517219-03G	Plastic 500ml unpreserved	A	7	7	2.9	Y	Absent		HEXCR-3500(1),FCN(1)
L2517219-03H	Amber 1L HCl preserved	A	NA		2.9	Y	Absent		OG-1664(28)
L2517219-03I	Amber 1L HCl preserved	A	NA		2.9	Y	Absent		OG-1664(28)
L2517219-04A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-04B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-04C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-04D	Plastic 250ml NaOH preserved	D	>12	>12	2.8	Y	Absent		TCN-4500(14)
L2517219-04E	Plastic 250ml HNO3 preserved	D	<2	<2	2.8	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517219-04F	Plastic 250ml HNO3 preserved	D	<2	<2	2.8	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2517219-04G	Plastic 500ml unpreserved	D	7	7	2.8	Y	Absent		HEXCR-3500(1),FCN(1)
L2517219-04H	Amber 1L HCl preserved	D	NA		2.8	Y	Absent		OG-1664(28)
L2517219-04I	Amber 1L HCl preserved	D	NA		2.8	Y	Absent		OG-1664(28)
L2517219-05A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-05A1	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-05A2	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-05B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-05B1	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)

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Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2517219-05B2	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-05C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-05C1	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-05C2	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-05D	Plastic 250ml NaOH preserved	F	>12	>12	2.2	Y	Absent		TCN-4500(14)
L2517219-05D1	Plastic 250ml NaOH preserved	F	>12	>12	2.2	Y	Absent		TCN-4500(14)
L2517219-05D2	Plastic 250ml NaOH preserved	F	>12	>12	2.2	Y	Absent		TCN-4500(14)
L2517219-05E	Plastic 250ml HNO3 preserved	F	<2	<2	2.2	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517219-05E1	Plastic 250ml HNO3 preserved	F	<2	<2	2.2	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517219-05E2	Plastic 250ml HNO3 preserved	F	<2	<2	2.2	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517219-05F	Plastic 250ml HNO3 preserved	F	<2	<2	2.2	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2517219-05F1	Plastic 250ml HNO3 preserved	F	<2	<2	2.2	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2517219-05F2	Plastic 250ml HNO3 preserved	F	<2	<2	2.2	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2517219-05G	Plastic 500ml unpreserved	F	7	7	2.2	Y	Absent		HEXCR-3500(1),FCN(1)
L2517219-05G1	Plastic 500ml unpreserved	F	7	7	2.2	Y	Absent		HEXCR-3500(1),FCN(1)
L2517219-05G2	Plastic 500ml unpreserved	F	7	7	2.2	Y	Absent		HEXCR-3500(1),FCN(1)
L2517219-05H	Amber 1L HCl preserved	F	NA		2.2	Y	Absent		OG-1664(28)
L2517219-05H1	Amber 1L HCl preserved	F	NA		2.2	Y	Absent		OG-1664(28)
L2517219-05H2	Amber 1L HCl preserved	F	NA		2.2	Y	Absent		OG-1664(28)
L2517219-05I	Amber 1L HCl preserved	F	NA		2.2	Y	Absent		OG-1664(28)
L2517219-05I1	Amber 1L HCl preserved	F	NA		2.2	Y	Absent		OG-1664(28)
L2517219-05I2	Amber 1L HCl preserved	F	NA		2.2	Y	Absent		OG-1664(28)
L2517219-06A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-06B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-06C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-06D	Plastic 250ml NaOH preserved	A	>12	>12	2.9	Y	Absent		TCN-4500(14)
L2517219-06E	Plastic 250ml HNO3 preserved	A	<2	<2	2.9	Y	Absent		CR-2008S(180),NI-2008S(180)

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Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2517219-06F	Plastic 250ml HNO3 preserved	A	<2	<2	2.9	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2517219-06G	Plastic 500ml unpreserved	A	7	7	2.9	Y	Absent		HEXCR-3500(1),FCN(1)
L2517219-06H	Amber 1L HCl preserved	A	NA		2.9	Y	Absent		OG-1664(28)
L2517219-06I	Amber 1L HCl preserved	A	NA		2.9	Y	Absent		OG-1664(28)
L2517219-07A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517219-07B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

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REFERENCES

- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 107 Calculation method.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.
- 140 Method 1664, Revision B: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-10-001, February 2010.

LIMITATION OF LIABILITIES

Pace Analytical Services performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Pace Analytical Services shall be to re-perform the work at it's own expense. In no event shall Pace Analytical Services be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Pace Analytical Services.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Pace Analytical Services LLC

ID No.:17873

Facility: **Northeast**

Revision 27

Department: **Quality Assurance**

Published Date: 01/24/2025

Title: **Certificate/Approval Program Summary**

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility – 8 Walkup Dr. Westborough, MA 01581**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

MADEP-APH.**Nonpotable Water:** EPA RSK-175 Dissolved Gases**Biological Tissue Matrix:** EPA 3050B**Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048****EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: EPA RSK-175 Dissolved Gases

The following test method is not included in our New Jersey Secondary NELAP Scope of Accreditation:

Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048**Determination of Selected Perfluorinated Alkyl Substances by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry Isotope Dilution (via Alpha SOP 23528)**

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility – 8 Walkup Dr. Westborough, MA 01581**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables).**Microbiology:** SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg. EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

Pace Analytical Services LLCID No.: **17873**Facility: **Northeast**

Revision 27

Department: **Quality Assurance**

Published Date: 01/24/2025

Title: **Certificate/Approval Program Summary**

Page 2 of 2

Certification IDs:**Westborough Facility – 8 Walkup Dr. Westborough, MA 01581**

CT PH-0826, IL 200077, IN C-MA-03, KY JY98045, ME MA00086, MD 348, MA M-MA086, NH 2064, NJ MA935, NY 11148, NC (DW) 25700, NC (NPW/SCM) 666, OR MA-1316, PA 68-03671, RI LAO00065, TX T104704476, VT VT-0935, VA 460195

Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048

CT PH-0825, ANAB/DoD L2474, IL 200081, IN C-MA-04, KY KY98046, LA 3090, ME MA00030, MI 9110, MN 025-999-495, NH 2062, NJ MA015, NY 11627, NC (NPW/SCM) 685, OR MA-0262, PA 68-02089, RI LAO00299, TX T-104704419, VT VT-0015, VA 460194, WA C954

Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048

ANAB/DoD L2474, ME MA01156, MN 025-999-498, NH 2249, NJ MA025, NY 12191, OR 4203, TX T104704583, VA 460311, WA C1104.

For a complete listing of analytes and methods, please contact your Project Manager.



ANALYTICAL REPORT

Lab Number:	L2517218
Client:	TRC Environmental 1617 JFK Blvd. Suite 510 Philadelphia, PA 19103
ATTN:	Julie Acton
Phone:	(215) 563-2122
Project Name:	SPS TECHNOLOGIES
Project Number:	658978
Report Date:	03/27/25

The original project report/data package is held by Pace Analytical Services. This report/data package is paginated and should be reproduced only in its entirety. Pace Analytical Services holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2517218-01	OF002-032425	WATER	JENKINTOWN, PA	03/24/25 09:00	03/24/25
L2517218-02	OF006-032425	WATER	JENKINTOWN, PA	03/24/25 11:00	03/24/25
L2517218-03	OF009-032425	WATER	JENKINTOWN, PA	03/24/25 10:15	03/24/25
L2517218-04	DUP-032425	WATER	JENKINTOWN, PA	03/24/25 08:00	03/24/25
L2517218-05	TB-OF-032425	WATER	JENKINTOWN, PA	03/23/25 00:00	03/24/25

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Pace Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Pace's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Pace Project Manager and made arrangements for Pace to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Case Narrative (continued)

Report Submission

March 27, 2025: This final report includes the results of all requested analyses.

March 25, 2025: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics by Method 624

L2517218-03D: Due to the sample matrix (foam generation during purging/analysis), the laboratory used Anti-Foam solution in the sample and associated QC.

L2517218-03D: The sample has elevated detection limits due to the dilution required by the sample matrix (cloudy).

Chemical Oxygen Demand


The WG2044812-3 MS recovery performed on L2517218-03 is outside the acceptance criteria for chemical oxygen demand (114%); however, the associated LCS recovery is within criteria. No further action was taken.

Solids, Total Suspended

The WG2044730-4 Laboratory Duplicate RPD performed on L2517218-03 is outside the acceptance criteria for solids, total suspended (67%) due to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 03/27/25

ORGANICS

VOLATILES

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-01
Client ID: OF002-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 09:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 11:25
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	0.0011	J	mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	87		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	92		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-02
Client ID: OF006-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 11:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 11:59
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	83		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	93		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-03 D
Client ID: OF009-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 10:15
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 13:08
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0040	0.0012	4
2-Butanone	ND		mg/l	0.040	0.0042	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	82		60-140
Fluorobenzene	71		60-140
4-Bromofluorobenzene	86		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-04
Client ID: DUP-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 08:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 12:34
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	84		60-140
Fluorobenzene	71		60-140
4-Bromofluorobenzene	91		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-05
Client ID: TB-OF-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/23/25 00:00
Date Received: 03/24/25
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/25/25 10:51
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	ND		mg/l	0.0010	0.00031	1
2-Butanone	ND		mg/l	0.010	0.0010	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	83		60-140
Fluorobenzene	71		60-140
4-Bromofluorobenzene	98		60-140

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 03/25/25 09:38
Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG2045078-4					
Toluene	ND		mg/l	0.0010	0.00031
2-Butanone	ND		mg/l	0.010	0.0010

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	87		60-140
Fluorobenzene	74		60-140
4-Bromofluorobenzene	87		60-140

Lab Control Sample Analysis **Batch Quality Control**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517218

Report Date: 03/27/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG2045078-3								
Toluene	95		-		70-130	-		41
2-Butanone	76		-		60-140	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	91				60-140
Fluorobenzene	80				60-140
4-Bromofluorobenzene	84				60-140

Matrix Spike Analysis

Batch Quality Control

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG2045078-5 WG2045078-6 QC Sample: L2517218-03 Client ID: OF009-032425												
Toluene	ND	0.08	0.088	110		0.086	108		47-150	2		41
2-Butanone	ND	0.2	0.16	80		0.18	90		60-140	12		30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
4-Bromofluorobenzene	87		86		60-140
Fluorobenzene	78		76		60-140
Pentafluorobenzene	86		93		60-140

METALS

Project Name: SPS TECHNOLOGIES

Lab Number: L2517218

Project Number: 658978

Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-01

Date Collected: 03/24/25 09:00

Client ID: OF002-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.2310		mg/l	0.01000	0.00327	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Chromium, Total	0.00121		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Copper, Total	0.01742		mg/l	0.00100	0.00038	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Iron, Total	0.1268		mg/l	0.05000	0.01910	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Lead, Total	0.00086	J	mg/l	0.00100	0.00034	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00269		mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Zinc, Total	0.1325		mg/l	0.00500	0.00341	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	33.73		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:03	EPA 3005A	3,200.8	NTB

General Chemistry - Mansfield Lab

Chromium, Trivalent	ND		mg/l	0.010	0.003	1	03/25/25 12:03	NA	107,-	
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Dissolved Metals - Mansfield Lab

Chromium, Dissolved	ND		mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:41	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0015	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:41	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517218**Project Number:** 658978**Report Date:** 03/27/25**SAMPLE RESULTS**

Lab ID: L2517218-02

Date Collected: 03/24/25 11:00

Client ID: OF006-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.3760		mg/l	0.01000	0.00327	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Chromium, Total	0.00216		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Copper, Total	0.00721		mg/l	0.00100	0.00038	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Iron, Total	0.6160		mg/l	0.05000	0.01910	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Lead, Total	0.00269		mg/l	0.00100	0.00034	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00150	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Zinc, Total	0.03570		mg/l	0.00500	0.00341	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	66.17		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:07	EPA 3005A	3,200.8	NTB

General Chemistry - Mansfield Lab

Chromium, Trivalent	ND		mg/l	0.010	0.003	1	03/25/25 12:07	NA	107,-	
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Dissolved Metals - Mansfield Lab

Chromium, Dissolved	0.0005	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0010	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:45	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517218**Project Number:** 658978**Report Date:** 03/27/25**SAMPLE RESULTS**

Lab ID: L2517218-03

Date Collected: 03/24/25 10:15

Client ID: OF009-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2.845		mg/l	0.01000	0.00327	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Chromium, Total	0.01809		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Copper, Total	0.05352		mg/l	0.00100	0.00038	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Iron, Total	5.300		mg/l	0.05000	0.01910	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Lead, Total	0.07608		mg/l	0.00100	0.00034	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Nickel, Total	0.01194		mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Zinc, Total	0.3662		mg/l	0.00500	0.00341	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	71.62		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 11:36	EPA 3005A	3,200.8	NTB

General Chemistry - Mansfield Lab

Chromium, Trivalent	0.018		mg/l	0.010	0.003	1	03/25/25 11:36	NA	107,-	
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Dissolved Metals - Mansfield Lab

Chromium, Dissolved	0.0006	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:30	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0012	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:30	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES**Lab Number:** L2517218**Project Number:** 658978**Report Date:** 03/27/25**SAMPLE RESULTS**

Lab ID: L2517218-04

Date Collected: 03/24/25 08:00

Client ID: DUP-032425

Date Received: 03/24/25

Sample Location: JENKINTOWN, PA

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.3951		mg/l	0.01000	0.00327	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Chromium, Total	0.00226		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Copper, Total	0.00737		mg/l	0.00100	0.00038	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Iron, Total	0.6356		mg/l	0.05000	0.01910	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Lead, Total	0.00290		mg/l	0.00100	0.00034	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00155	J	mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Zinc, Total	0.03714		mg/l	0.00500	0.00341	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	67.07		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 12:22	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/25/25 12:22	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0005	J	mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:49	EPA 3005A	3,200.8	BLR
Nickel, Dissolved	0.0010	J	mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:49	EPA 3005A	3,200.8	BLR



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG2044700-1										
Aluminum, Total	0.00609	J	mg/l	0.01000	0.00327	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB
Chromium, Total	ND		mg/l	0.00100	0.00017	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB
Copper, Total	0.00044	J	mg/l	0.00100	0.00038	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB
Iron, Total	ND		mg/l	0.05000	0.01910	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB
Lead, Total	ND		mg/l	0.00100	0.00034	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB
Nickel, Total	ND		mg/l	0.00200	0.00055	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB
Zinc, Total	ND		mg/l	0.00500	0.00341	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01-04 Batch: WG2044700-1										
Hardness	ND		mg/l	0.5400	NA	1	03/25/25 07:56	03/25/25 11:27	3,200.8	NTB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-04 Batch: WG2044702-1										
Chromium, Dissolved	ND		mg/l	0.0010	0.0002	1	03/25/25 07:56	03/25/25 12:23	3,200.8	BLR
Nickel, Dissolved	ND		mg/l	0.0020	0.0006	1	03/25/25 07:56	03/25/25 12:23	3,200.8	BLR

Prep Information

Digestion Method: EPA 3005A



Lab Control Sample Analysis **Batch Quality Control**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517218

Report Date: 03/27/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG2044700-2								
Aluminum, Total	98		-		85-115	-		
Chromium, Total	99		-		85-115	-		
Copper, Total	106		-		85-115	-		
Iron, Total	108		-		85-115	-		
Lead, Total	96		-		85-115	-		
Nickel, Total	103		-		85-115	-		
Zinc, Total	103		-		85-115	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-04 Batch: WG2044700-2								
Hardness	103		-		85-115	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG2044702-2								
Chromium, Dissolved	94		-		85-115	-		
Nickel, Dissolved	110		-		85-115	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG2044700-3 WG2044700-4 QC Sample: L2517218-03 Client ID: OF009-032425												
Aluminum, Total	2.845	2	5.097	113		5.059	111		70-130	1		20
Chromium, Total	0.01809	0.2	0.2150	98		0.2102	96		70-130	2		20
Copper, Total	0.05352	0.25	0.3209	107		0.3114	103		70-130	3		20
Iron, Total	5.300	1	6.144	84		6.068	77		70-130	1		20
Lead, Total	0.07608	0.53	0.6041	100		0.6010	99		70-130	1		20
Nickel, Total	0.01194	0.5	0.5312	104		0.5165	101		70-130	3		20
Zinc, Total	0.3662	0.5	0.9138	110		0.8902	105		70-130	3		20

Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG2044700-3 WG2044700-4 QC Sample: L2517218-03 Client ID: OF009-032425

Hardness	71.62	66.2	140.3	104		137.3	99		70-130	2		20
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Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG2044700-5 WG2044700-6 QC Sample: L2517219-05 Client ID: MS Sample

Aluminum, Total	0.0548	2	2.020	98		2.039	99		70-130	1		20
Chromium, Total	0.00045J	0.2	0.1950	98		0.1967	98		70-130	1		20
Copper, Total	0.0027	0.25	0.2643	105		0.2633	104		70-130	0		20
Iron, Total	0.1780	1	1.229	105		1.254	108		70-130	2		20
Lead, Total	0.0005J	0.53	0.5314	100		0.5405	102		70-130	2		20
Nickel, Total	0.00130J	0.5	0.5209	104		0.5160	103		70-130	1		20
Zinc, Total	0.0092	0.5	0.5192	102		0.5179	102		70-130	0		20

Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG2044700-5 WG2044700-6 QC Sample: L2517219-05 Client ID: MS Sample

Hardness	170.3	66.2	236.9	101		235.6	99		70-130	1		20
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Matrix Spike Analysis

Batch Quality Control

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG2044702-3 WG2044702-4 QC Sample: L2517218-03 Client ID: OF009-032425									
Chromium, Dissolved	0.0006J	0.2	0.1789	89	0.1757	88	70-130	2	20
Nickel, Dissolved	0.0012J	0.5	0.5250	105	0.5138	103	70-130	2	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG2044702-5 WG2044702-6 QC Sample: L2517219-05 Client ID: MS Sample									
Chromium, Dissolved	ND	0.2	0.1837	92	0.1767	88	70-130	4	20
Nickel, Dissolved	0.0013J	0.5	0.5281	106	0.4880	98	70-130	8	20

INORGANICS & MISCELLANEOUS

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-01
Client ID: OF002-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 09:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	17.		mg/l	5.0	NA	1	-	03/25/25 06:59	121,2540D	BAY
Cyanide, Total	ND		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 13:51	121,4500CN-CE	JER
Cyanide, Free	0.006	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Nitrogen, Nitrate/Nitrite	0.54		mg/l	0.10	0.046	1	-	03/25/25 07:14	44,353.2	KAF
Chemical Oxygen Demand	67.		mg/l	20	6.0	1	03/25/25 10:00	03/25/25 13:56	44,410.4	CVN
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:54	140,1664B	TPR
Chromium, Hexavalent	0.004	J	mg/l	0.010	0.003	1	03/25/25 07:05	03/25/25 07:33	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-02
Client ID: OF006-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 11:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	13.		mg/l	5.0	NA	1	-	03/25/25 06:59	121,2540D	BAY
Cyanide, Total	0.004	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 13:52	121,4500CN-CE	JER
Cyanide, Free	0.004	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Nitrogen, Nitrate/Nitrite	1.3		mg/l	0.10	0.046	1	-	03/25/25 07:15	44,353.2	KAF
Chemical Oxygen Demand	39.		mg/l	20	6.0	1	03/25/25 10:00	03/25/25 13:56	44,410.4	CVN
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:55	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:05	03/25/25 07:34	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-03
Client ID: OF009-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 10:15
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	240		mg/l	12	NA	2.5	-	03/25/25 06:59	121,2540D	BAY
Cyanide, Total	0.006		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 15:32	121,4500CN-CE	JER
Cyanide, Free	0.005	J	mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Nitrogen, Nitrate/Nitrite	0.42		mg/l	0.10	0.046	1	-	03/25/25 07:16	44,353.2	KAF
Chemical Oxygen Demand	100		mg/l	20	6.0	1	03/25/25 10:00	03/25/25 13:57	44,410.4	CVN
Oil & Grease, Hem-Grav	5.6		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:56	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:05	03/25/25 07:35	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

SAMPLE RESULTS

Lab ID: L2517218-04
Client ID: DUP-032425
Sample Location: JENKINTOWN, PA

Date Collected: 03/24/25 08:00
Date Received: 03/24/25
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	14.		mg/l	5.5	NA	1.1	-	03/25/25 06:59	121,2540D	BAY
Cyanide, Total	0.003	J	mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 15:33	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
Nitrogen, Nitrate/Nitrite	1.4		mg/l	0.10	0.046	1	-	03/25/25 07:23	44,353.2	KAF
Chemical Oxygen Demand	32.		mg/l	20	6.0	1	03/25/25 10:00	03/25/25 13:57	44,410.4	CVN
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:53	140,1664B	TPR
Chromium, Hexavalent	0.003	J	mg/l	0.010	0.003	1	03/25/25 07:05	03/25/25 07:40	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Lab Number: L2517218

Project Number: 658978

Report Date: 03/27/25

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG2044644-1										
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	0.046	1	-	03/25/25 04:44	44,353.2	KAF
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG2044708-1										
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/25/25 07:06	121,4500CN-E(M)	KAF
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG2044709-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/25/25 07:05	03/25/25 07:32	121,3500CR-B	DMO
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG2044730-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	03/25/25 06:59	121,2540D	BAY
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG2044802-1										
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/25/25 08:36	03/25/25 10:10	140,1664B	TPR
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG2044812-1										
Chemical Oxygen Demand	ND		mg/l	20	6.0	1	03/25/25 10:00	03/25/25 13:54	44,410.4	CVN
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG2044815-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	03/25/25 10:25	03/25/25 13:37	121,4500CN-CE	JER



Lab Control Sample Analysis **Batch Quality Control**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2517218

Report Date: 03/27/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG2044644-2								
Nitrogen, Nitrate/Nitrite	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG2044708-2								
Cyanide, Free	102		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG2044709-2								
Chromium, Hexavalent	106		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG2044730-2								
Solids, Total Suspended	83		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG2044802-2								
Oil & Grease, Hem-Grav	96		-		78-114	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG2044812-2								
Chemical Oxygen Demand	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG2044815-2								
Cyanide, Total	90		-		90-110	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044644-4 QC Sample: L2515855-01 Client ID: MS Sample												
Nitrogen, Nitrate/Nitrite	0.85	4	4.8	99		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044644-6 QC Sample: L2515964-04 Client ID: MS Sample												
Nitrogen, Nitrate/Nitrite	3.4	4	6.7	82		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044644-8 QC Sample: L2517218-03 Client ID: OF009-032425												
Nitrogen, Nitrate/Nitrite	0.42	4	4.0	90		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044708-4 WG2044708-5 QC Sample: L2517218-03 Client ID: OF009-032425												
Cyanide, Free	0.005J	0.25	0.258	103		0.252	101		80-120	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044709-4 WG2044709-5 QC Sample: L2517218-03 Client ID: OF009-032425												
Chromium, Hexavalent	ND	0.1	0.108	108		0.108	108		85-115	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044802-4 WG2044802-5 QC Sample: L2517219-05 Client ID: MS Sample												
Oil & Grease, Hem-Grav	ND	39.2	37	95		36	92		78-114	3		18
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044802-6 WG2044802-7 QC Sample: L2517218-03 Client ID: OF009-032425												
Oil & Grease, Hem-Grav	5.6	39.2	37	80		37	80		78-114	0		18
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044812-3 QC Sample: L2517218-03 Client ID: OF009-032425												
Chemical Oxygen Demand	100	238	370	114	Q	-	-		90-110	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044815-3 WG2044815-4 QC Sample: L2517218-03 Client ID: OF009-032425									
Cyanide, Total	0.006	0.2	0.206	100	0.204	99	90-110	3	30
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044815-5 WG2044815-6 QC Sample: L2517219-05 Client ID: MS Sample									
Cyanide, Total	ND	0.2	0.198	99	0.200	100	90-110	1	30

Lab Duplicate Analysis

Batch Quality Control

Project Name: SPS TECHNOLOGIES
Project Number: 658978

Lab Number: L2517218
Report Date: 03/27/25

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG2044644-3	QC Sample: L2515855-01	Client ID: DUP	Sample	
Nitrogen, Nitrate/Nitrite	0.85	0.88	mg/l	3		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG2044644-5	QC Sample: L2515964-04	Client ID: DUP	Sample	
Nitrogen, Nitrate/Nitrite	3.4	3.4	mg/l	0		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG2044644-7	QC Sample: L2517218-03	Client ID: OF009-032425		
Nitrogen, Nitrate/Nitrite	0.42	0.40	mg/l	5		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG2044708-3	QC Sample: L2517218-03	Client ID: OF009-032425		
Cyanide, Free	0.005J	0.006J	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG2044709-3	QC Sample: L2517218-03	Client ID: OF009-032425		
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG2044730-3	QC Sample: L2515900-01	Client ID: DUP	Sample	
Solids, Total Suspended	240	320	mg/l	29		32
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG2044730-4	QC Sample: L2517218-03	Client ID: OF009-032425		
Solids, Total Suspended	240	120	mg/l	67	Q	32
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG2044802-3	QC Sample: L2517219-05	Client ID: DUP	Sample	
Oil & Grease, Hem-Grav	ND	ND	mg/l	NC		18
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG2044812-4	QC Sample: L2517218-03	Client ID: OF009-032425		
Chemical Oxygen Demand	100	100	mg/l	0		20

Lab Duplicate Analysis
*Batch Quality Control***Project Name:** SPS TECHNOLOGIES**Project Number:** 658978**Lab Number:** L2517218**Report Date:** 03/27/25

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG2044815-7 QC Sample: L2517219-05 Client ID: DUP Sample					
Cyanide, Total	ND	ND	mg/l	NC	30

Project Name: SPS TECHNOLOGIES**Lab Number:** L2517218**Project Number:** 658978**Report Date:** 03/27/25**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler Custody Seal**

A	Absent
B	Absent
C	Absent
D	Absent
E	Absent
F	Absent
G	Absent
H	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2517218-01A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-01B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-01C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-01D	Plastic 250ml HNO3 preserved	E	<2	<2	2.1	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517218-01E	Plastic 250ml HNO3 preserved	E	<2	<2	2.1	Y	Absent		AL-2008T(180),NI-2008T(180),ZN-2008T(180),HARDT-2008(180),CU-2008T(180),FE-2008T(180),PB-2008T(180),CR-2008T(180)
L2517218-01F	Plastic 250ml H2SO4 preserved	E	<2	<2	2.1	Y	Absent		NO3/NO2-353(28),COD-410(28)
L2517218-01G	Plastic 250ml NaOH preserved	E	>12	>12	2.1	Y	Absent		TCN-4500(14)
L2517218-01H	Plastic 950ml unpreserved	E	7	7	2.1	Y	Absent		HEXCR-3500(1),FCN(1)
L2517218-01J	Plastic 950ml unpreserved	E	7	7	2.1	Y	Absent		TSS-2540(7)
L2517218-01K	Amber 1L HCl preserved	E	NA		2.1	Y	Absent		OG-1664(28)
L2517218-01L	Amber 1L HCl preserved	E	NA		2.1	Y	Absent		OG-1664(28)
L2517218-02A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-02B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-02C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)

Project Name: SPS TECHNOLOGIES**Lab Number:** L2517218**Project Number:** 658978**Report Date:** 03/27/25**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2517218-02D	Plastic 250ml HNO3 preserved	C	<2	<2	2.1	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517218-02E	Plastic 250ml HNO3 preserved	C	<2	<2	2.1	Y	Absent		AL-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),HARDT-2008(180),FE-2008T(180),CR-2008T(180),PB-2008T(180)
L2517218-02F	Plastic 250ml H2SO4 preserved	C	<2	<2	2.1	Y	Absent		NO3/NO2-353(28),COD-410(28)
L2517218-02G	Plastic 250ml NaOH preserved	C	>12	>12	2.1	Y	Absent		TCN-4500(14)
L2517218-02H	Plastic 950ml unpreserved	C	7	7	2.1	Y	Absent		HEXCR-3500(1),FCN(1)
L2517218-02J	Plastic 950ml unpreserved	C	7	7	2.1	Y	Absent		TSS-2540(7)
L2517218-02K	Amber 1L HCl preserved	C	NA		2.1	Y	Absent		OG-1664(28)
L2517218-02L	Amber 1L HCl preserved	C	NA		2.1	Y	Absent		OG-1664(28)
L2517218-03A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-03A1	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-03A2	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-03B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-03B1	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-03B2	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-03C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-03C1	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-03C2	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-03D	Plastic 250ml HNO3 preserved	E	<2	<2	2.1	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517218-03D1	Plastic 250ml HNO3 preserved	H	<2	<2	2.7	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517218-03D2	Plastic 250ml HNO3 preserved	H	<2	<2	2.7	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517218-03E	Plastic 250ml HNO3 preserved	E	<2	<2	2.1	Y	Absent		AL-2008T(180),NI-2008T(180),ZN-2008T(180),HARDT-2008(180),CU-2008T(180),FE-2008T(180),PB-2008T(180),CR-2008T(180)
L2517218-03E1	Plastic 250ml HNO3 preserved	H	<2	<2	2.7	Y	Absent		AL-2008T(180),NI-2008T(180),ZN-2008T(180),HARDT-2008(180),CU-2008T(180),FE-2008T(180),PB-2008T(180),CR-2008T(180)

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2517218-03E2	Plastic 250ml HNO3 preserved	H	<2	<2	2.7	Y	Absent		AL-2008T(180),NI-2008T(180),ZN-2008T(180),HARDT-2008(180),CU-2008T(180),FE-2008T(180),PB-2008T(180),CR-2008T(180)
L2517218-03F	Plastic 250ml H2SO4 preserved	E	<2	<2	2.1	Y	Absent		NO3/NO2-353(28),COD-410(28)
L2517218-03F1	Plastic 250ml H2SO4 preserved	H	<2	<2	2.7	Y	Absent		NO3/NO2-353(28),COD-410(28)
L2517218-03F2	Plastic 250ml H2SO4 preserved	H	<2	<2	2.7	Y	Absent		NO3/NO2-353(28),COD-410(28)
L2517218-03G	Plastic 250ml NaOH preserved	E	>12	>12	2.1	Y	Absent		TCN-4500(14)
L2517218-03G1	Plastic 250ml NaOH preserved	H	>12	>12	2.7	Y	Absent		TCN-4500(14)
L2517218-03G2	Plastic 250ml NaOH preserved	H	>12	>12	2.7	Y	Absent		TCN-4500(14)
L2517218-03H	Plastic 950ml unpreserved	E	7	7	2.1	Y	Absent		HEXCR-3500(1),FCN(1)
L2517218-03H1	Plastic 950ml unpreserved	H	7	7	2.7	Y	Absent		HEXCR-3500(1),FCN(1)
L2517218-03H2	Plastic 950ml unpreserved	H	7	7	2.7	Y	Absent		HEXCR-3500(1),FCN(1)
L2517218-03J	Plastic 950ml unpreserved	E	7	7	2.1	Y	Absent		TSS-2540(7)
L2517218-03J1	Plastic 950ml unpreserved	H	7	7	2.7	Y	Absent		TSS-2540(7)
L2517218-03J2	Plastic 950ml unpreserved	H	7	7	2.7	Y	Absent		TSS-2540(7)
L2517218-03K	Amber 1L HCl preserved	E	NA		2.1	Y	Absent		OG-1664(28)
L2517218-03K1	Amber 1L HCl preserved	H	NA		2.7	Y	Absent		OG-1664(28)
L2517218-03K2	Amber 1L HCl preserved	H	NA		2.7	Y	Absent		OG-1664(28)
L2517218-03L	Amber 1L HCl preserved	E	NA		2.1	Y	Absent		OG-1664(28)
L2517218-03L1	Amber 1L HCl preserved	H	NA		2.7	Y	Absent		OG-1664(28)
L2517218-03L2	Amber 1L HCl preserved	H	NA		2.7	Y	Absent		OG-1664(28)
L2517218-04A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-04B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-04C	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-04D	Plastic 250ml HNO3 preserved	C	<2	<2	2.1	Y	Absent		CR-2008S(180),NI-2008S(180)
L2517218-04E	Plastic 250ml HNO3 preserved	C	<2	<2	2.1	Y	Absent		AL-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),HARDT-2008(180),FE-2008T(180),PB-2008T(180),CR-2008T(180)
L2517218-04F	Plastic 250ml H2SO4 preserved	C	<2	<2	2.1	Y	Absent		NO3/NO2-353(28),COD-410(28)

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2517218-04G	Plastic 250ml NaOH preserved	C	>12	>12	2.1	Y	Absent		TCN-4500(14)
L2517218-04H	Plastic 950ml unpreserved	C	7	7	2.1	Y	Absent		HEXCR-3500(1),FCN(1)
L2517218-04J	Plastic 950ml unpreserved	C	7	7	2.1	Y	Absent		TSS-2540(7)
L2517218-04K	Amber 1L HCl preserved	C	NA		2.1	Y	Absent		OG-1664(28)
L2517218-04L	Amber 1L HCl preserved	C	NA		2.1	Y	Absent		OG-1664(28)
L2517218-05A	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)
L2517218-05B	Vial Na2S2O3 preserved	G	NA		2.3	Y	Absent		624.1-PPM(7)

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenzo(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

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REFERENCES

- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 107 Calculation method.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.
- 140 Method 1664, Revision B: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-10-001, February 2010.

LIMITATION OF LIABILITIES

Pace Analytical Services performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Pace Analytical Services shall be to re-perform the work at its own expense. In no event shall Pace Analytical Services be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Pace Analytical Services.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Pace Analytical Services LLCFacility: **Northeast**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility – 8 Walkup Dr. Westborough, MA 01581**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

MADEP-APH.**Nonpotable Water:** EPA RSK-175 Dissolved Gases**Biological Tissue Matrix:** EPA 3050B**Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048****EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: EPA RSK-175 Dissolved Gases

The following test method is not included in our New Jersey Secondary NELAP Scope of Accreditation:

Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048**Determination of Selected Perfluorinated Alkyl Substances by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry Isotope Dilution (via Alpha SOP 23528)**

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility – 8 Walkup Dr. Westborough, MA 01581**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables).**Microbiology:** SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg. EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

Pace Analytical Services LLCID No.: **17873**Facility: **Northeast**

Revision 27

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Certification IDs:**Westborough Facility – 8 Walkup Dr. Westborough, MA 01581**

CT PH-0826, IL 200077, IN C-MA-03, KY JY98045, ME MA00086, MD 348, MA M-MA086, NH 2064, NJ MA935, NY 11148, NC (DW) 25700, NC (NPW/SCM) 666, OR MA-1316, PA 68-03671, RI LAO00065, TX T104704476, VT VT-0935, VA 460195

Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048

CT PH-0825, ANAB/DoD L2474, IL 200081, IN C-MA-04, KY KY98046, LA 3090, ME MA00030, MI 9110, MN 025-999-495, NH 2062, NJ MA015, NY 11627, NC (NPW/SCM) 685, OR MA-0262, PA 68-02089, RI LAO00299, TX T-104704419, VT VT-0015, VA 460194, WA C954

Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048

ANAB/DoD L2474, ME MA01156, MN 025-999-498, NH 2249, NJ MA025, NY 12191, OR 4203, TX T104704583, VA 460311, WA C1104.

For a complete listing of analytes and methods, please contact your Project Manager.

