



# **SPS TECHNOLOGIES - ABINGTON PA DAILY SURFACE WATER AND OUTFALL SAMPLING RESULTS REPORT FOR MARCH 18, 2025**

**PREPARED FOR:**  
SPS TECHNOLOGIES

**PREPARED BY:**  
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**MARCH 21, 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 accordance with WSP USA Inc. Surface Water and Outfall Sampling Plan revised on March 5, 2025 (Sampling Plan). The samples were collected on March 16, 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. Please note, outfalls were not sampled during this sampling event because there was no precipitation.

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
<b>Volatile Organic Compounds</b>							
Toluene	mg/L	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	mg/L	ND	ND	ND	ND	ND	ND
<b>General Chemistry</b>							
Chromium, Trivalent	mg/L	ND	ND	ND	ND	ND	ND
Chromium, Hexavalent	mg/L	ND	ND	ND	ND	ND	ND
Total Cyanide	mg/L	ND	ND	ND	ND	ND	ND
Free Cyanide	mg/L	ND	ND	ND	ND	ND	ND
Oil & Grease	mg/L	ND	ND	ND	ND	ND	ND
<b>Total Metals</b>							
Total Chromium	mg/L	0.00023 J	0.00032 J	0.00028 J	0.00025 J	0.00027 J	0.00033 J
Total Nickel	mg/L	0.00317	0.00099 J	0.00094 J	0.00108 J	0.00189 J	0.00109 J
<b>Dissolved Metals</b>							
Dissolved Chromium	mg/L	0.0002 J	0.0004 J	0.0002 J	0.0002 J	0.0003 J	0.0003 J
Dissolved Nickel	mg/L	0.0029	0.0010 J	0.0011 J	0.0013 J	0.0020	0.0011 J
<b>Total Hardness</b>							
Hardness	mg/L	256.9	231.7	226.3	227.8	188.9	111.9
<b>Field Parameters</b>							
pH	SU	7.29	7.27	7.44	7.44	6.52	5.85

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 18, 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 sampling results from March 18, 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 18, 2025. The locations are located northeast and west from the facility, and downstream from the conjoined stream south from the facility. Outfalls were not sampled during this event because there was no precipitation.

#### 3.1 Surface Water Sampling Methodology

TRC collected the surface water samples in accordance with the Sampling Plan. Field data collected from each surface water 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 form included as **Appendix A**, except for the in-field pH measurement, which is summarized in **Table 1**.

#### 3.2 Surface Water 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 are summarized in **Table 1**. The sampling locations are shown on **Figures 1 and 2**.

#### **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 form included as **Appendix A** and pH readings are summarized in **Table 1**.

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 report is included as **Appendix B**. The laboratory analytical report is included as **Appendix C**.

##### **4.4 References**

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







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


C:\Users\USPC714485\OneDrive - WSP\0366\Documents\TEMP\_SPS\03 SW-Outlet Sampling\Fig 1-2 SW-Outlet Sample Locations.dwg Tue, 25 Feb 2025 - 4:03pm USPC714485 Layout: Fig 1 On-Site SW-Outlet Sample Locations


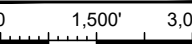


C:\Users\USPC714485\OneDrive - WSP\0365\Documents\TEMP\_SPS\03 SW-Outfall Sampling\Fig 1-2 SW-Outfall Sample Locations.dwg Tue, 25 Feb 2025 - 4:05pm USPC714485 Layout: Fig 2 Off-Site SW Sample Locations



**SOURCE**  
GEOMAP IMAGERY, 2025.

**LEGEND**  
SW = SURFACE WATER  
 SURFACE WATER SAMPLE LOCATION

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





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	Lab Sample ID	SW2-031825			SW1-031825			SW3-031825			DUP-031825			SW4-031825			SW5-031825		
Sampling Date	Matrix	L2515563-02			L2515563-01			L2515563-03			L2515563-06			L2515563-04			L2515563-05		
		3/18/2025			3/18/2025			3/18/2025			3/18/2025			3/18/2025			3/18/2025		
		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
<b>Volatile Organic Compounds</b>																			
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
<b>General Chemistry</b>																			
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	ND		0.010	ND		0.010	ND		0.010	ND		0.010	ND		0.010
Total Cyanide	mg/L	ND		0.005	ND		0.005	ND		0.005	ND		0.005	ND		0.005	ND		0.005
Free Cyanide	mg/L	ND		0.010	ND		0.010	ND		0.010	ND		0.010	ND		0.010	ND		0.010
Oil & Grease	mg/L	ND		4.0	ND		4.0	ND		4.0	ND		4.0	ND		4.0	ND		4.0
<b>Total Metals</b>																			
Total Chromium	mg/L	0.00023	J	0.00100	0.00032	J	0.00100	0.00028	J	0.00100	0.00025	J	0.00100	0.00027	J	0.00100	0.00033	J	0.00100
Total Nickel	mg/L	0.00317		0.00200	0.00099	J	0.00200	0.00094	J	0.00200	0.00108	J	0.00200	0.00189	J	0.00200	0.00109	J	0.00200
<b>Dissolved Metals</b>																			
Dissolved Chromium	mg/L	0.0002	J	0.0010	0.0004	J	0.0010	0.0002	J	0.0010	0.0002	J	0.0010	0.0003	J	0.0010	0.0003	J	0.0010
Dissolved Nickel	mg/L	0.0029		0.0020	0.0010	J	0.0020	0.0011	J	0.0020	0.0013	J	0.0020	0.0020		0.0020	0.0011	J	0.0020
<b>Total Hardness</b>																			
Hardness	mg/L	256.9		0.5400	231.7		0.5400	226.3		0.5400	227.8		0.5400	188.9		0.5400	111.9		0.5400
<b>Field Parameters</b>																			
pH <sup>1</sup>	SU	7.29			7.27			7.44			7.44			6.52			5.85		

**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 3/20/2025 Checked By: MO 3/20/2025



Date: 3/18/2025

Project Number: 658978

SURFACE WATER SAMPLE FIELD INFORMATION FORM

Site: SPS  
 Location: Abington PA  
 Project Number: 658978  
 Water Quality Meter: Hanna U-50 S/N: U110312X  
 Meter Calibrated @: 3/18/2025 @ 0840  
 Flow Meter: HMP Pro S/N: 336387  
 Sampling Date/Time: SW5 @ 0940 SW4 @ 1035 SW1 @ 1110  
SW2 @ 1140 SW3 @ 1210  
 Sampler(s): J. Goulges C. Graham  
 Sampling Device: Telescoping Dipper Pole  
 Sample Characteristics: Clear NO odor  
 Analytical Parameters:

Additional Notes:  
Collect MS/MO from SW5  
Collect Dup-031825 from SW3  
Minnows observed at SW3 and SW1  
PDO 0.0 at all locations

Weather Conditions: Sunny H60 L31 Wind 10mph NNW Gusts 27 mph

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	SU	mS/cm	mV	NTU	mg/L	ft/sec
SW5-031825	Creek	03/18/25	0940	16	8	6.24	0.3	5.85	0.636	354	2.2	7.49	0.360
Sample Characteristics:		Clear NO odor											
SW4-031825	Creek	03/18/25	1035	44	22	7.46	0.4	6.52	0.905	242	0.0	10.65	0.307
Sample Characteristics:		Clear NO odor											
SW1-031825	Creek	03/18/25	1110	8.5	4.25	9.04	0.4	7.27	0.883	245	2.7	14.21	0.329
Sample Characteristics:		Clear NO odor											
SW2-031825	Creek	03/18/25	1140	18.5	9.25	8.79	0.6	7.29	1.22	235	1.4	11.29	0.091
Sample Characteristics:		Clear NO odor											
SW3-031825	Creek	03/18/25	1210	29.5	14.75	12.94	0.4	7.44	0.885	236	1.4	12.30	0.362
Sample Characteristics:		Clear NO odor											
Sample Characteristics:													
Sample Characteristics:													
Sample Characteristics:													
Staff Gauge Reading													



### **Data Validation Report**

**Site:** SPS Technologies, Surface Water Sampling  
**Laboratory:** Pace Analytical, Westborough and Mansfield, MA  
**SDG No.:** L2515563  
**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:** Kristen Morin/TRC  
**Date:** March 19, 2025

### **Samples Reviewed and Evaluation Summary**

6 Surface Water Samples: SW1-031825, SW2-031825, SW3-031825, SW4-031825, SW5-031825, DUP-031825<sup>1</sup>

1 Trip Blank: TRIP BLANK-031825

<sup>1</sup>Field duplicate of SW3-031825

The above-listed samples were collected on March 18, 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 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 3/16/25 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 SW5-031825 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 SW5-031825 for total cyanide, free cyanide, oil and grease, and hexavalent chromium. All criteria were met.

## **LCS Results**

All criteria were met for all parameters.

## **Field Duplicate Results**

Samples SW3-031825 and DUP-031825 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. All criteria were met.

Analyte	QLs (mg/L)	SW3-031825 (mg/L)	DUP-031825 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Chromium	0.001	0.00028 J	0.00025 J	AbsD = 0.00003	None; all criteria were met.
Total Nickel	0.002	0.00094 J	0.00108 J	AbsD = 0.00014	
Hardness	0.54	226.3	227.8	RPD = 0.7	
Dissolved Chromium	0.001	0.0002 J	0.0002 J	AbsD = 0	
Dissolved Nickel	0.002	0.0011 J	0.0013 J	AbsD = 0.0002	

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 metals 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.

There were no 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  $\geq 5x$  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:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

Lab ID: L2515563-01  
 Client ID: SW1-031825  
 Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 11:10  
 Date Received: 03/18/25  
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water  
 Analytical Method: 128,624.1  
 Analytical Date: 03/19/25 11:20  
 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	78		60-140
Fluorobenzene	74		60-140
4-Bromofluorobenzene	113		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

Lab ID: L2515563-02  
 Client ID: SW2-031825  
 Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 11:40  
 Date Received: 03/18/25  
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water  
 Analytical Method: 128,624.1  
 Analytical Date: 03/19/25 11:52  
 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	76		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	114		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

**Lab ID:** L2515563-03  
**Client ID:** SW3-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 12:10  
**Date Received:** 03/18/25  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1  
**Analytical Date:** 03/19/25 12:24  
**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	76		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	113		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

**Lab ID:** L2515563-04  
**Client ID:** SW4-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 10:35  
**Date Received:** 03/18/25  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1  
**Analytical Date:** 03/19/25 12:58  
**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	71		60-140
4-Bromofluorobenzene	111		60-140



**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

Lab ID: L2515563-05  
 Client ID: SW5-031825  
 Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 09:40  
 Date Received: 03/18/25  
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water  
 Analytical Method: 128,624.1  
 Analytical Date: 03/19/25 14:04  
 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	72		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	121		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

**Lab ID:** L2515563-06  
**Client ID:** DUP-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 00:00  
**Date Received:** 03/18/25  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1  
**Analytical Date:** 03/19/25 13:31  
**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	78		60-140
Fluorobenzene	74		60-140
4-Bromofluorobenzene	116		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

**Lab ID:** L2515563-07  
**Client ID:** TRIP BLANK-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/16/25 00:00  
**Date Received:** 03/18/25  
**Field Prep:** None

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1  
**Analytical Date:** 03/19/25 10:47  
**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	73		60-140
4-Bromofluorobenzene	118		60-140

## METALS

**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-01

Date Collected: 03/18/25 11:10

Client ID: SW1-031825

Date Received: 03/18/25

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	0.00032	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00099	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	231.7		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 11:58	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0004	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0010	J	mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB



**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-02

Date Collected: 03/18/25 11:40

Client ID: SW2-031825

Date Received: 03/18/25

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	0.00023	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00317		mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	256.9		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 12:03	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0002	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0029		mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB



**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-03

Date Collected: 03/18/25 12:10

Client ID: SW3-031825

Date Received: 03/18/25

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
<b>Total Metals - Mansfield Lab</b>											
Chromium, Total	0.00028	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 12:08	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00094	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 12:08	EPA 3005A	3,200.8	NTB
<b>Total Hardness (by calculation) - Mansfield Lab</b>											
Hardness	226.3		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 12:08	EPA 3005A	3,200.8	NTB
<b>General Chemistry - Mansfield Lab</b>											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 12:08	NA	107,-	
<b>Dissolved Metals - Mansfield Lab</b>											
Chromium, Dissolved	0.0002	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 12:07	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0011	J	mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 12:07	EPA 3005A	3,200.8	NTB



**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-04

Date Collected: 03/18/25 10:35

Client ID: SW4-031825

Date Received: 03/18/25

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	0.00027	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00189	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	188.9		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 12:12	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0003	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0020		mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB





**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-05

Date Collected: 03/18/25 09:40

Client ID: SW5-031825

Date Received: 03/18/25

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	0.00033	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00109	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	111.9		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 11:45	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0003	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0011	J	mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB



**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-06

Date Collected: 03/18/25 00:00

Client ID: DUP-031825

Date Received: 03/18/25

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	0.00025	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 12:17	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00108	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 12:17	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	227.8		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 12:17	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 12:17	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0002	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 12:16	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0013	J	mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 12:16	EPA 3005A	3,200.8	NTB



# **INORGANICS & MISCELLANEOUS**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2515563

Report Date: 03/19/25

## SAMPLE RESULTS

Lab ID: L2515563-01

Client ID: SW1-031825

Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 11:10

Date Received: 03/18/25

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	03/19/25 10:50	03/19/25 14:51	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:17	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:31	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2515563

Report Date: 03/19/25

## SAMPLE RESULTS

Lab ID: L2515563-02

Client ID: SW2-031825

Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 11:40

Date Received: 03/18/25

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	03/19/25 10:50	03/19/25 14:52	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:18	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:32	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2515563

Report Date: 03/19/25

## SAMPLE RESULTS

Lab ID: L2515563-03

Client ID: SW3-031825

Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 12:10

Date Received: 03/18/25

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	03/19/25 10:50	03/19/25 14:53	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:09	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:33	121,3500CR-B	DMO



**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

### SAMPLE RESULTS

**Lab ID:** L2515563-04  
**Client ID:** SW4-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 10:35  
**Date Received:** 03/18/25  
**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	03/19/25 10:50	03/19/25 14:54	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:31	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:34	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2515563

Report Date: 03/19/25

## SAMPLE RESULTS

Lab ID: L2515563-05

Client ID: SW5-031825

Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 09:40

Date Received: 03/18/25

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	03/19/25 10:50	03/19/25 14:55	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN- E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 09:41	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:35	121,3500CR-B	DMO





**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

### SAMPLE RESULTS

**Lab ID:** L2515563-06  
**Client ID:** DUP-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 00:00  
**Date Received:** 03/18/25  
**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	03/19/25 10:50	03/19/25 15:01	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:32	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:39	121,3500CR-B	DMO







## ANALYTICAL REPORT

Lab Number:	L2515563
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:	03/19/25

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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).

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



**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2515563-01	SW1-031825	WATER	JENKINTOWN, PA	03/18/25 11:10	03/18/25
L2515563-02	SW2-031825	WATER	JENKINTOWN, PA	03/18/25 11:40	03/18/25
L2515563-03	SW3-031825	WATER	JENKINTOWN, PA	03/18/25 12:10	03/18/25
L2515563-04	SW4-031825	WATER	JENKINTOWN, PA	03/18/25 10:35	03/18/25
L2515563-05	SW5-031825	WATER	JENKINTOWN, PA	03/18/25 09:40	03/18/25
L2515563-06	DUP-031825	WATER	JENKINTOWN, PA	03/18/25 00:00	03/18/25
L2515563-07	TRIP BLANK-031825	WATER	JENKINTOWN, PA	03/16/25 00:00	03/18/25

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

### 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.

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**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**Case Narrative (continued)**

Report Submission

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:  Kelly O'Neill

Title: Technical Director/Representative

Date: 03/19/25

# ORGANICS

# **VOLATILES**



**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

**Lab ID:** L2515563-01  
**Client ID:** SW1-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 11:10  
**Date Received:** 03/18/25  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1  
**Analytical Date:** 03/19/25 11:20  
**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	78		60-140
Fluorobenzene	74		60-140
4-Bromofluorobenzene	113		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

Lab ID: L2515563-02  
 Client ID: SW2-031825  
 Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 11:40  
 Date Received: 03/18/25  
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water  
 Analytical Method: 128,624.1  
 Analytical Date: 03/19/25 11:52  
 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	76		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	114		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

**Lab ID:** L2515563-03  
**Client ID:** SW3-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 12:10  
**Date Received:** 03/18/25  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1  
**Analytical Date:** 03/19/25 12:24  
**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	76		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	113		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

Lab ID: L2515563-04  
 Client ID: SW4-031825  
 Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 10:35  
 Date Received: 03/18/25  
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water  
 Analytical Method: 128,624.1  
 Analytical Date: 03/19/25 12:58  
 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	71		60-140
4-Bromofluorobenzene	111		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

**Lab ID:** L2515563-05  
**Client ID:** SW5-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 09:40  
**Date Received:** 03/18/25  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1  
**Analytical Date:** 03/19/25 14:04  
**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	72		60-140
Fluorobenzene	72		60-140
4-Bromofluorobenzene	121		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

Lab ID: L2515563-06  
 Client ID: DUP-031825  
 Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 00:00  
 Date Received: 03/18/25  
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water  
 Analytical Method: 128,624.1  
 Analytical Date: 03/19/25 13:31  
 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	78		60-140
Fluorobenzene	74		60-140
4-Bromofluorobenzene	116		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**SAMPLE RESULTS**

**Lab ID:** L2515563-07  
**Client ID:** TRIP BLANK-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/16/25 00:00  
**Date Received:** 03/18/25  
**Field Prep:** None

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1  
**Analytical Date:** 03/19/25 10:47  
**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	73		60-140
4-Bromofluorobenzene	118		60-140

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 128,624.1  
 Analytical Date: 03/19/25 09:54  
 Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG2042623-4					
Toluene	ND		mg/l	0.0010	0.00031
2-Butanone	ND		mg/l	0.010	0.0010

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	82		60-140
Fluorobenzene	73		60-140
4-Bromofluorobenzene	113		60-140



# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** SPS TECHNOLOGIES

**Project Number:** 658978

**Lab Number:** L2515563

**Report Date:** 03/19/25

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG2042623-3								
Toluene	115		-		70-130	-		41
2-Butanone	72		-		60-140	-		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Pentafluorobenzene	89				60-140
Fluorobenzene	86				60-140
4-Bromofluorobenzene	111				60-140

# **Matrix Spike Analysis** **Batch Quality Control**

**Project Name:** SPS TECHNOLOGIES

**Lab Number:** L2515563

**Project Number:** 658978

**Report Date:** 03/19/25

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG2042623-5 WG2042623-6 QC Sample: L2515563-05 Client ID: SW5-031825												
Toluene	ND	0.00002	0.024	120		0.024	120		47-150	0		41
2-Butanone	ND	0.00005	0.030	60		0.034	68		60-140	13		30

<i>Surrogate</i>	<i>MS % Recovery</i>	<i>Qualifier</i>	<i>MSD % Recovery</i>	<i>Qualifier</i>	<i>Acceptance Criteria</i>
4-Bromofluorobenzene	113		112		60-140
Fluorobenzene	81		83		60-140
Pentafluorobenzene	80		87		60-140

## METALS

**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-01

Date Collected: 03/18/25 11:10

Client ID: SW1-031825

Date Received: 03/18/25

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	0.00032	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00099	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	231.7		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 11:58	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0004	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0010	J	mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 11:58	EPA 3005A	3,200.8	NTB



**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-02

Date Collected: 03/18/25 11:40

Client ID: SW2-031825

Date Received: 03/18/25

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	0.00023	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00317		mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	256.9		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 12:03	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0002	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0029		mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 12:03	EPA 3005A	3,200.8	NTB



**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-03

Date Collected: 03/18/25 12:10

Client ID: SW3-031825

Date Received: 03/18/25

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
<b>Total Metals - Mansfield Lab</b>											
Chromium, Total	0.00028	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 12:08	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00094	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 12:08	EPA 3005A	3,200.8	NTB
<b>Total Hardness (by calculation) - Mansfield Lab</b>											
Hardness	226.3		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 12:08	EPA 3005A	3,200.8	NTB
<b>General Chemistry - Mansfield Lab</b>											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 12:08	NA	107,-	
<b>Dissolved Metals - Mansfield Lab</b>											
Chromium, Dissolved	0.0002	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 12:07	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0011	J	mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 12:07	EPA 3005A	3,200.8	NTB



**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-04

Date Collected: 03/18/25 10:35

Client ID: SW4-031825

Date Received: 03/18/25

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
<b>Total Metals - Mansfield Lab</b>											
Chromium, Total	0.00027	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00189	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB
<b>Total Hardness (by calculation) - Mansfield Lab</b>											
Hardness	188.9		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB
<b>General Chemistry - Mansfield Lab</b>											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 12:12	NA	107,-	
<b>Dissolved Metals - Mansfield Lab</b>											
Chromium, Dissolved	0.0003	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0020		mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 12:12	EPA 3005A	3,200.8	NTB



**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-05

Date Collected: 03/18/25 09:40

Client ID: SW5-031825

Date Received: 03/18/25

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	0.00033	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00109	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	111.9		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 11:45	NA	107,-	
Dissolved Metals - Mansfield Lab											
Chromium, Dissolved	0.0003	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0011	J	mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 11:45	EPA 3005A	3,200.8	NTB





**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**SAMPLE RESULTS**

Lab ID: L2515563-06

Date Collected: 03/18/25 00:00

Client ID: DUP-031825

Date Received: 03/18/25

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
<b>Total Metals - Mansfield Lab</b>											
Chromium, Total	0.00025	J	mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 12:17	EPA 3005A	3,200.8	NTB
Nickel, Total	0.00108	J	mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 12:17	EPA 3005A	3,200.8	NTB
<b>Total Hardness (by calculation) - Mansfield Lab</b>											
Hardness	227.8		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 12:17	EPA 3005A	3,200.8	NTB
<b>General Chemistry - Mansfield Lab</b>											
Chromium, Trivalent	ND		mg/l	0.010	0.003	1		03/19/25 12:17	NA	107,-	
<b>Dissolved Metals - Mansfield Lab</b>											
Chromium, Dissolved	0.0002	J	mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 12:16	EPA 3005A	3,200.8	NTB
Nickel, Dissolved	0.0013	J	mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 12:16	EPA 3005A	3,200.8	NTB



Project Name: SPS TECHNOLOGIES

Lab Number: L2515563

Project Number: 658978

Report Date: 03/19/25

## 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: WG2042285-1										
Chromium, Total	ND		mg/l	0.00100	0.00017	1	03/19/25 07:36	03/19/25 11:35	3,200.8	NTB
Nickel, Total	ND		mg/l	0.00200	0.00055	1	03/19/25 07:36	03/19/25 11:35	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: WG2042285-1										
Hardness	ND		mg/l	0.5400	NA	1	03/19/25 07:36	03/19/25 11:35	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: WG2042287-1										
Chromium, Dissolved	ND		mg/l	0.0010	0.0002	1	03/19/25 07:36	03/19/25 11:36	3,200.8	NTB
Nickel, Dissolved	ND		mg/l	0.0020	0.0006	1	03/19/25 07:36	03/19/25 11:36	3,200.8	NTB

### Prep Information

Digestion Method: EPA 3005A



# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** SPS TECHNOLOGIES

**Project Number:** 658978

**Lab Number:** L2515563

**Report Date:** 03/19/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 Batch: WG2042285-2								
Chromium, Total	99		-		85-115	-		
Nickel, Total	102		-		85-115	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-06 Batch: WG2042285-2								
Hardness	103		-		85-115	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 01-06 Batch: WG2042287-2								
Chromium, Dissolved	101		-		85-115	-		
Nickel, Dissolved	104		-		85-115	-		

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

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: WG2042285-3 WG2042285-4 QC Sample: L2515563-05 Client ID: SW5-031825												
Chromium, Total	0.00033J	0.2	0.2044	102		0.2070	104		70-130	1		20
Nickel, Total	0.00109J	0.5	0.5287	106		0.5425	108		70-130	3		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG2042285-3 WG2042285-4 QC Sample: L2515563-05 Client ID: SW5-031825												
Hardness	111.9	66.2	184.5	110		187.6	114		70-130	2		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG2042287-3 WG2042287-4 QC Sample: L2515563-05 Client ID: SW5-031825												
Chromium, Dissolved	0.0003J	0.2	0.2022	101		0.2025	101		70-130	0		20
Nickel, Dissolved	0.0011J	0.5	0.5345	107		0.5285	106		70-130	1		20

# **INORGANICS & MISCELLANEOUS**

Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2515563

Report Date: 03/19/25

## SAMPLE RESULTS

Lab ID: L2515563-01

Client ID: SW1-031825

Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 11:10

Date Received: 03/18/25

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	03/19/25 10:50	03/19/25 14:51	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:17	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:31	121,3500CR-B	DMO



**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

### SAMPLE RESULTS

**Lab ID:** L2515563-02  
**Client ID:** SW2-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 11:40  
**Date Received:** 03/18/25  
**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	03/19/25 10:50	03/19/25 14:52	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:18	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:32	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2515563

Report Date: 03/19/25

## SAMPLE RESULTS

Lab ID: L2515563-03

Client ID: SW3-031825

Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 12:10

Date Received: 03/18/25

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	03/19/25 10:50	03/19/25 14:53	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:09	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:33	121,3500CR-B	DMO





Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2515563

Report Date: 03/19/25

## SAMPLE RESULTS

Lab ID: L2515563-04

Client ID: SW4-031825

Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 10:35

Date Received: 03/18/25

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	03/19/25 10:50	03/19/25 14:54	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:31	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:34	121,3500CR-B	DMO



**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

### SAMPLE RESULTS

**Lab ID:** L2515563-05  
**Client ID:** SW5-031825  
**Sample Location:** JENKINTOWN, PA

**Date Collected:** 03/18/25 09:40  
**Date Received:** 03/18/25  
**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	03/19/25 10:50	03/19/25 14:55	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 09:41	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:35	121,3500CR-B	DMO



Project Name: SPS TECHNOLOGIES

Project Number: 658978

Lab Number: L2515563

Report Date: 03/19/25

## SAMPLE RESULTS

Lab ID: L2515563-06

Client ID: DUP-031825

Sample Location: JENKINTOWN, PA

Date Collected: 03/18/25 00:00

Date Received: 03/18/25

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	03/19/25 10:50	03/19/25 15:01	121,4500CN-CE	JER
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 12:32	140,1664B	TPR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:39	121,3500CR-B	DMO



**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

**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: WG2042349-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	03/19/25 09:23	03/19/25 09:29	121,3500CR-B	DMO
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG2042356-1										
Cyanide, Free	ND		mg/l	0.010	0.003	1	-	03/19/25 08:23	121,4500CN-E(M)	KAF
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG2042373-1										
Oil & Grease, Hem-Grav	ND		mg/l	4.0	4.0	1	03/19/25 08:21	03/19/25 09:43	140,1664B	TPR
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG2042382-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	03/19/25 10:50	03/19/25 14:40	121,4500CN-CE	JER



# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** SPS TECHNOLOGIES

**Project Number:** 658978

**Lab Number:** L2515563

**Report Date:** 03/19/25

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG2042349-2								
Chromium, Hexavalent	102		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG2042356-2								
Cyanide, Free	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG2042373-2								
Oil & Grease, Hem-Grav	94		-		78-114	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG2042382-2								
Cyanide, Total	94		-		90-110	-		

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

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: WG2042349-4 WG2042349-5 QC Sample: L2515563-05 Client ID: SW5-031825												
Chromium, Hexavalent	ND	0.1	0.105	105		0.105	105		85-115	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2042356-4 WG2042356-5 QC Sample: L2515563-05 Client ID: SW5-031825												
Cyanide, Free	ND	0.25	0.262	105		0.263	105		80-120	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2042373-4 WG2042373-5 QC Sample: L2515563-05 Client ID: SW5-031825												
Oil & Grease, Hem-Grav	ND	39.2	37	94		37	94		78-114	1		18
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2042382-3 WG2042382-4 QC Sample: L2515563-05 Client ID: SW5-031825												
Cyanide, Total	ND	0.2	0.216	108		0.210	105		90-110	3		30

## Lab Duplicate Analysis

*Batch Quality Control*

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2042349-3 QC Sample: L2515563-05 Client ID: SW5-031825						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2042356-3 QC Sample: L2515563-05 Client ID: SW5-031825						
Cyanide, Free	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2042373-3 QC Sample: L2515563-05 Client ID: SW5-031825						
Oil & Grease, Hem-Grav	ND	ND	mg/l	NC		18
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG2042382-5 QC Sample: L2515563-05 Client ID: SW5-031825						
Cyanide, Total	ND	ND	mg/l	NC		30

**Project Name:** SPS TECHNOLOGIES**Lab Number:** L2515563**Project Number:** 658978**Report Date:** 03/19/25**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent
B	Absent
C	Absent
D	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2515563-01A	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-01B	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-01C	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-01D	Plastic 250ml NaOH preserved	A	>12	>12	2.7	Y	Absent		TCN-4500(14)
L2515563-01E	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		CR-2008S(180),NI-2008S(180)
L2515563-01F	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2515563-01G	Plastic 500ml unpreserved	A	7	7	2.7	Y	Absent		HEXCR-3500(1),FCN(1)
L2515563-01H	Amber 1L HCl preserved	A	NA		2.7	Y	Absent		OG-1664(28)
L2515563-01J	Amber 1L HCl preserved	A	NA		2.7	Y	Absent		OG-1664(28)
L2515563-02A	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-02B	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-02C	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-02D	Plastic 250ml NaOH preserved	C	>12	>12	2.8	Y	Absent		TCN-4500(14)
L2515563-02E	Plastic 250ml HNO3 preserved	C	<2	<2	2.8	Y	Absent		CR-2008S(180),NI-2008S(180)
L2515563-02F	Plastic 250ml HNO3 preserved	C	<2	<2	2.8	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2515563-02G	Plastic 500ml unpreserved	C	7	7	2.8	Y	Absent		HEXCR-3500(1),FCN(1)
L2515563-02H	Amber 1L HCl preserved	C	NA		2.8	Y	Absent		OG-1664(28)
L2515563-02J	Amber 1L HCl preserved	C	NA		2.8	Y	Absent		OG-1664(28)
L2515563-03A	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)



**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

Serial\_No:03192516:47  
**Lab Number:** L2515563  
**Report Date:** 03/19/25

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2515563-03B	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-03C	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-03D	Plastic 250ml NaOH preserved	C	>12	>12	2.8	Y	Absent		TCN-4500(14)
L2515563-03E	Plastic 250ml HNO3 preserved	C	<2	<2	2.8	Y	Absent		CR-2008S(180),NI-2008S(180)
L2515563-03F	Plastic 250ml HNO3 preserved	C	<2	<2	2.8	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2515563-03G	Plastic 500ml unpreserved	C	7	7	2.8	Y	Absent		HEXCR-3500(1),FCN(1)
L2515563-03H	Amber 1L HCl preserved	C	NA		2.8	Y	Absent		OG-1664(28)
L2515563-03J	Amber 1L HCl preserved	C	NA		2.8	Y	Absent		OG-1664(28)
L2515563-04A	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-04B	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-04C	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-04D	Plastic 250ml NaOH preserved	A	>12	>12	2.7	Y	Absent		TCN-4500(14)
L2515563-04E	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		CR-2008S(180),NI-2008S(180)
L2515563-04F	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2515563-04G	Plastic 500ml unpreserved	A	7	7	2.7	Y	Absent		HEXCR-3500(1),FCN(1)
L2515563-04H	Amber 1L HCl preserved	A	NA		2.7	Y	Absent		OG-1664(28)
L2515563-04J	Amber 1L HCl preserved	A	NA		2.7	Y	Absent		OG-1664(28)
L2515563-05A	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-05A1	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-05A2	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-05B	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-05B1	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-05B2	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-05C	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-05C1	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-05C2	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-05D	Plastic 250ml NaOH preserved	B	>12	>12	3.5	Y	Absent		TCN-4500(14)

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

Serial\_No:03192516:47  
**Lab Number:** L2515563  
**Report Date:** 03/19/25

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2515563-05D1	Plastic 250ml NaOH preserved	B	>12	>12	3.5	Y	Absent		TCN-4500(14)
L2515563-05D2	Plastic 250ml NaOH preserved	B	>12	>12	3.5	Y	Absent		TCN-4500(14)
L2515563-05E	Plastic 250ml HNO3 preserved	B	<2	<2	3.5	Y	Absent		CR-2008S(180),NI-2008S(180)
L2515563-05E1	Plastic 250ml HNO3 preserved	B	<2	<2	3.5	Y	Absent		CR-2008S(180),NI-2008S(180)
L2515563-05E2	Plastic 250ml HNO3 preserved	B	<2	<2	3.5	Y	Absent		CR-2008S(180),NI-2008S(180)
L2515563-05F	Plastic 250ml HNO3 preserved	B	<2	<2	3.5	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2515563-05F1	Plastic 250ml HNO3 preserved	B	<2	<2	3.5	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2515563-05F2	Plastic 250ml HNO3 preserved	B	<2	<2	3.5	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2515563-05G	Plastic 500ml unpreserved	B	7	7	3.5	Y	Absent		HEXCR-3500(1),FCN(1)
L2515563-05G1	Plastic 500ml unpreserved	B	7	7	3.5	Y	Absent		HEXCR-3500(1),FCN(1)
L2515563-05G2	Plastic 500ml unpreserved	B	7	7	3.5	Y	Absent		HEXCR-3500(1),FCN(1)
L2515563-05H	Amber 1L HCl preserved	B	NA		3.5	Y	Absent		OG-1664(28)
L2515563-05H1	Amber 1L HCl preserved	B	NA		3.5	Y	Absent		OG-1664(28)
L2515563-05H2	Amber 1L HCl preserved	B	NA		3.5	Y	Absent		OG-1664(28)
L2515563-05J	Amber 1L HCl preserved	B	NA		3.5	Y	Absent		OG-1664(28)
L2515563-05J1	Amber 1L HCl preserved	B	NA		3.5	Y	Absent		OG-1664(28)
L2515563-05J2	Amber 1L HCl preserved	B	NA		3.5	Y	Absent		OG-1664(28)
L2515563-06A	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-06B	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-06C	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)
L2515563-06D	Plastic 250ml NaOH preserved	A	>12	>12	2.7	Y	Absent		TCN-4500(14)
L2515563-06E	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		CR-2008S(180),NI-2008S(180)
L2515563-06F	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		NI-2008T(180),HARDT-2008(180),CR-2008T(180)
L2515563-06G	Plastic 500ml unpreserved	A	7	7	2.7	Y	Absent		HEXCR-3500(1),FCN(1)
L2515563-06H	Amber 1L HCl preserved	A	NA		2.7	Y	Absent		OG-1664(28)
L2515563-06J	Amber 1L HCl preserved	A	NA		2.7	Y	Absent		OG-1664(28)
L2515563-07A	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)

\*Values in parentheses indicate holding time in days



**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

Serial\_No:03192516:47  
**Lab Number:** L2515563  
**Report Date:** 03/19/25

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2515563-07B	Vial Na2S2O3 preserved	D	NA		2.0	Y	Absent		624.1-PPM(7)

**Project Name:** SPS TECHNOLOGIES  
**Project Number:** 658978

**Lab Number:** L2515563  
**Report Date:** 03/19/25

## 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 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 LLC**Facility: **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, NO<sub>2</sub>, NO<sub>3</sub>.**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 LLC**ID No.: **17873**Facility: **Northeast**

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Title: **Certificate/Approval Program Summary**

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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.

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

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