SPS Technologies - Abington PA
Addendum: Daily Surface Water and Outfall Sampling Results Reports for March 8, 2025 through March 14, 2025

Prepared For:
SPS Technologies

Prepared By:
TRC Environmental Corporation, Inc
1617 JFK Boulevard, Suite 510
Philadelphia, PA 19103

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Appendices

1.0 EXECUTIVE SUMMARY

TRC Environmental Corporation (TRC), on behalf of SPS Technologies Abington PA (SPS), is issuing an addendum to seven Daily Surface Water and Outfall Sampling Results reports due to the inadvertent omission of text summarizing the volatile organic compound (VOC) surrogate recovery review. The VOC surrogate recovery review was completed during data validation activities. The data and the interpretation of the data are not affected by the inadvertent text omission, which occurred in the reports documenting analytical data validation results for samples collected by TRC between March 8, 2025, and March 14, 2025. Replacement pages for the affected Data Validation Reports are provided in **Appendix A** through **Appendix G** of this Addendum.

2.0 INTRODUCTION

TRC Environmental Corporation (TRC), on behalf of SPS Technologies Abington PA (SPS), has prepared this addendum for seven Daily Surface Water and Outfall Sampling Results Reports issued between March 12 and March 17, 2025, due to the inadvertent omission of text summarizing the volatile organic compound (VOC) surrogate recovery review. The VOC surrogate recovery review was completed during data validation activities. The data and the interpretation of the data are not impacted by the inadvertent text omission. This addendum affects the reports documenting analytical data validation results for samples collected by TRC between March 8, 2025 and March 14, 2025. Replacement pages for the seven affected Data Validation Reports are provided in **Appendix A** through **Appendix G** of this Addendum.

The replacement pages provided in this Addendum are summarized below.

Sample Collection Date	Replacement Pages Provided in Addendum	Location of Replacement Pages
March 8, 2025	Pages 1, 2, and 3 of Appendix B from *Daily Surface Water And Outfall Sampling Results Report For March 8, 2025* (issued March 12, 2025)	**Appendix A**
March 9, 2025	Pages 1, 2, and 3 of Appendix B from *Daily Surface Water And Outfall Sampling Results Report For March 9, 2025* (issued March 12, 2025)	**Appendix B**
March 10, 2025	Pages 1, 2, and 3 of Appendix B from *Daily Surface Water And Outfall Sampling Results Report For March 10, 2025* (issued March 13, 2025)	**Appendix C**
March 11, 2025	Pages 1, 2, and 3 of Appendix B from *Daily Surface Water And Outfall Sampling Results Report For March 11, 2025* (issued March 14, 2025)	**Appendix D**
March 12, 2025	Pages 1, 2, and 3 of Appendix B from *Daily Surface Water And Outfall Sampling Results Report For March 12, 2025* (issued March 15, 2025)	**Appendix E**
March 13, 2025	Pages 1, 2, and 3 of Appendix B from *Daily Surface Water And Outfall Sampling Results Report For March 13, 2025* (issued March 16, 2025)	**Appendix F**
March 14, 2025	Pages 1, 2, and 3 of Appendix B from *Daily Surface Water And Outfall Sampling Results Report For March 14, 2025* (issued March 17, 2025)	**Appendix G**

Data Validation Report

Site: SPS Technologies, Surface Water Sampling
Laboratory: Pace Analytical, Westborough and Mansfield, MA
SDG No.: L2513207
Parameters: Select Volatile Organic Compounds (VOCs), Select Metals, Hardness, Total Cyanide, Free Cyanide, Oil & Grease, Hexavalent Chromium, Trivalent Chromium
Data Reviewer: Elizabeth Denly/TRC
Peer Reviewer: Kristen Morin/TRC
Date: March 10, 2025

Samples Reviewed and Evaluation Summary

6 Surface Water Samples:	SW1-030825, SW2-030825, SW3-030825, SW4-030825, SW-030825, DUP-030825[1]
1 Field Blank:	FIELD BLANK-030825
1 Trip Blank:	TBSW-030825

[1]Field duplicate of SW1-030825

The above-listed samples were collected on March 8, 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, total cyanide, and free cyanide results that were below the lowest calibration standard and QL. These results were qualified as estimated (J) by the laboratory in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level 2 data package.

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 and field blank. Target VOCs were not detected in the trip blank.

Surrogate Recoveries (VOCs only)

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample SW2-030825 for VOCs, total and dissolved metals, hardness, total cyanide, free cyanide, oil and grease, and hexavalent chromium. All criteria were met.

MS analysis was also performed on sample SW3-030825 for dissolved metals. All criteria were met.

Laboratory Duplicate Results

Laboratory duplicate analyses were performed on sample SW2-030825 for total cyanide, free cyanide, oil and grease, and hexavalent chromium, and sample SW3-030825 for dissolved metals. All criteria were met.

LCS Results

All criteria were met for all parameters.

Field Duplicate Results

Samples SW1-030825 and DUP-030825 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. All criteria were met.

Analyte	QLs (mg/L)	SW1-030825 (mg/L)	DUP-030825 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Nickel	0.002	0.00137 J	0.00126 J	AbsD = 0.00011	None; all criteria were met.
Hardness	0.54	230.1	244.4	RPD = 6.0	
Dissolved Chromium	0.001	0.0003 J	0.0003 J	AbsD = 0	
Dissolved Nickel	0.002	0.0011 J	0.0011 J	AbsD = 0	
Total Cyanide	0.005	0.001 J	0.001 J	AbsD = 0	

Field duplicate criteria are as follows:

- RPD ≤ 30 when positive results for both samples are ≥ 5x QL
- AbsD ≤ QL when one or both results are < 5x QL

Sample Results and Reported Quantitation Limits

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

Sample FIELD BLANK-030825 was diluted 1.1-fold for oil and grease likely due to sample volume available for analysis. There were no other dilutions performed on the samples in this data set.

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

Data Validation Report

Site: SPS Technologies, Surface Water Sampling
Laboratory: Pace Analytical, Westborough and Mansfield, MA
SDG No.: L2513225
Parameters: Select Volatile Organic Compounds (VOCs), Select Metals, Hardness, Total Cyanide, Free Cyanide, Oil & Grease, Hexavalent Chromium, Trivalent Chromium
Data Reviewer: Elizabeth Denly/TRC
Peer Reviewer: Kristen Morin/TRC
Date: March 10, 2025

Samples Reviewed and Evaluation Summary

6 Surface Water Samples:	SW1-030925, SW2-030925, SW3-030925, SW4-030925, SW5-030925, DUP-030925[1]
1 Field Blank:	FIELD BLANK-030925
1 Trip Blank:	TBSW-030925

[1]Field duplicate of SW5-030925

The above-listed samples were collected on March 9, 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, total cyanide, free cyanide, and hexavalent chromium 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.

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 and field blank. Target VOCs were not detected in the trip blank.

Surrogate Recoveries (VOCs only)

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample SW3-030925 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 SW3-030925 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 SW5-030925 and DUP-030925 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. All criteria were met.

Analyte	QLs (mg/L)	SW5-030925 (mg/L)	DUP-030925 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Nickel	0.002	0.00164 J	0.00098 J	AbsD = 0.00066	None; all criteria were met.
Hardness	0.54	201.2	196.9	RPD = 2.2	
Dissolved Nickel	0.002	0.0013 J	0.0012 J	AbsD = 0.0001	
Total Cyanide	0.005	0.005 U	0.001 J	AbsD = 0.004	
Free Cyanide	0.010	0.004 J	0.004 J	AbsD = 0	
Hexavalent Chromium	0.010	0.004 J	0.004 J	AbsD = 0	

Field duplicate criteria are as follows:

- RPD ≤ 30 when positive results for both samples are ≥ 5x QL
- AbsD ≤ QL when one or both results are < 5x QL

Sample Results and Reported Quantitation Limits

Select metals, total cyanide, free cyanide, and hexavalent chromium 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.

Sample FIELD BLANK-030925 was diluted 1.1-fold for oil and grease likely due to sample volume available for analysis. There were no other dilutions performed on the samples in this data set.

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

Data Validation Report

Site:	SPS Technologies, Surface Water Sampling
Laboratory:	Pace Analytical, Westborough and Mansfield, MA
SDG No.:	L2513343
Parameters:	Select Volatile Organic Compounds (VOCs), Select Metals, Hardness, Total Cyanide, Free Cyanide, Oil & Grease, Hexavalent Chromium, Trivalent Chromium
Data Reviewer:	Elizabeth Denly/TRC
Peer Reviewer:	Kristen Morin/TRC
Date:	March 11, 2025

Samples Reviewed and Evaluation Summary

6 Surface Water Samples:	SW1-031025, SW2-031025, SW3-031025, SW4-031025, SW5-031025, DUP-031025[1]
1 Field Blank:	FIELD BLANK-031025
1 Trip Blank:	TBSW-031025

[1]Field duplicate of SW3-031025

The above-listed samples were collected on March 10, 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. Qualifications applied to the data as a result of sampling error are discussed below.

- The positive results for total chromium were qualified as nondetect (U) in all surface water samples in this data set due to field blank contamination. These results can be used for project objectives as nondetects, which should not have an impact on the data usability.

Qualifications applied to the data as a result of analytical error are discussed below.

- Potential uncertainty exists for select metals, total cyanide, and hexavalent chromium 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 3/9/25 on the chain-of-custody. 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. With the exception of total chromium and trivalent chromium, target analytes were not detected in the field blank. Total chromium and trivalent chromium were detected in the field blank at concentrations of 0.00301 mg/L and 0.003 J mg/L, respectively. The positive results for total chromium in all surface water samples in this data set were qualified as nondetect (U) at the QL since the results were < the QL. Qualification of the data was not required for trivalent chromium since this analyte was not detected in the surface water samples in this data set.

Surrogate Recoveries (VOCs only)

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample SW5-031025 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 SW5-031025 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 SW3-031025 and DUP-031025 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)	SW3-031025 (mg/L)	DUP-031025 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Nickel	0.002	0.00107 J	0.00107 J	AbsD = 0	None; all criteria were met.
Hardness	0.54	210.7	212.6	RPD = 0.90	
Dissolved Chromium	0.001	0.0002 J	0.0002 J	AbsD = 0	
Dissolved Nickel	0.002	0.0014 J	0.0012 J	AbsD = 0.0002	
Total Cyanide	0.005	0.003 J	0.001 J	AbsD = 0.002	
Hexavalent Chromium	0.010	0.005 J	0.003 J	AbsD = 0.002	

Field duplicate criteria are as follows:

- RPD ≤ 30 when positive results for both samples are ≥ 5x QL
- AbsD ≤ QL when one or both results are < 5x QL

Sample Results and Reported Quantitation Limits

Select metals, total cyanide, and hexavalent chromium 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 ≤ 20% when dissolved results are greater than total results and both results are ≥ 5x the QL. If the dissolved result was > the total and one or both results were < 5x the QL, then the AbsD should be ≤ 2x the QL. These criteria were met for all results.

Data Validation Report

Site: SPS Technologies, Surface Water Sampling
Laboratory: Pace Analytical, Westborough and Mansfield, MA
SDG No.: L2513773
Parameters: Select Volatile Organic Compounds (VOCs), Select Metals, Hardness, Total Cyanide, Free Cyanide, Oil & Grease, Hexavalent Chromium, Trivalent Chromium
Data Reviewer: Elizabeth Denly/TRC
Peer Reviewer: Kristen Morin/TRC
Date: March 12, 2025

Samples Reviewed and Evaluation Summary

6 Surface Water Samples:	SW1-031125, SW2-031125, SW3-031125, SW4-031125, SW5-031125, DUP-031125[1]
1 Field Blank:	FIELD BLANK-031125
1 Trip Blank:	TBSW-031125

[1]Field duplicate of SW3-031125

The above-listed samples were collected on March 11, 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. Qualifications applied to the data as a result of sampling error are discussed below.

- The positive results for total chromium were qualified as nondetect (U) in samples SW1-031125, SW3-031125, SW4-031125, and DUP-031125 due to field blank contamination. These results can be used for project objectives as nondetects, which should not have an impact on the data usability.

Qualifications applied to the data as a result of analytical error are discussed below.

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

Data Completeness

The data package was a complete Level 2 data package. It should be noted that the date of collection for the trip blank was listed as 3/9/25 on the chain-of-custody. 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. With the exception of total chromium, target analytes were not detected in the field blank. Total chromium was detected in the field blank at a concentration of 0.00073 J mg/L. The positive results for total chromium in samples SW1-031125, SW3-031125, SW4-031125, and DUP-031125 were qualified as nondetect (U) at the QL since the results were < the QL. Qualification of the data was not required for total chromium in the remaining surface water samples in this data set since total chromium was not detected in these samples.

Surrogate Recoveries (VOCs only)

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample SW5-031125 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 SW5-031125 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 SW3-031125 and DUP-031125 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)	SW3-031125 (mg/L)	DUP-031125 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Nickel	0.002	0.00097 J	0.00110 J	AbsD = 0.00013	None; all criteria were met.
Hardness	0.54	232.4	224.0	RPD = 3.7	
Dissolved Chromium	0.001	0.0002 J	0.0002 J	AbsD = 0	
Dissolved Nickel	0.002	0.0011 J	0.0011 J	AbsD = 0	
Total Cyanide	0.005	0.002 J	0.002 J	AbsD = 0	

Field duplicate criteria are as follows:

- RPD ≤ 30 when positive results for both samples are ≥ 5x QL
- AbsD ≤ QL when one or both results are < 5x QL

Sample Results and Reported Quantitation Limits

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

Sample FIELD BLANK-031125 was diluted 1.1-fold for oil and grease likely due to sample volume available for analysis. There were no other dilutions performed on the samples in this data set.

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

Data Validation Report

Site: SPS Technologies, Surface Water Sampling
Laboratory: Pace Analytical, Westborough and Mansfield, MA
SDG No.: L2514110
Parameters: Select Volatile Organic Compounds (VOCs), Select Metals, Hardness, Total Cyanide, Free Cyanide, Oil & Grease, Hexavalent Chromium, Trivalent Chromium
Data Reviewer: Elizabeth Denly/TRC
Peer Reviewer: Kristen Morin/TRC
Date: March 13, 2025

Samples Reviewed and Evaluation Summary

6 Surface Water Samples:	SW1-031225, SW2-031225, SW3-031225, SW4-031225, SW5-031225, DUP-031225[1]
1 Field Blank:	FIELD BLANK-031225
1 Trip Blank:	TBSW-031225

[1]Field duplicate of SW3-031225

The above-listed samples were collected on March 12, 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, total cyanide, and free cyanide results that were below the lowest calibration standard and QL. These results were qualified as estimated (J) by the laboratory in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level 2 data package. It should be noted that the date of collection for the trip blank was listed as 3/9/25 on the chain-of-custody; the laboratory logged in the collection date for this sample as 3/12/25 (i.e., the same date of collection as the associated samples). For purposes of this assessment, it was assumed the date of collection was the same as the associated samples and the laboratory was not contacted about this discrepancy.

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 or field blank. Target VOCs were not detected in the trip blank.

Surrogate Recoveries (VOCs only)

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample SW5-031225 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 SW5-031225 for total cyanide, free cyanide, and oil and grease and sample SW1-031225 for hexavalent chromium. All criteria were met.

LCS Results

All criteria were met for all parameters.

Field Duplicate Results

Samples SW3-031225 and DUP-031225 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)	SW3-031225 (mg/L)	DUP-031225 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Nickel	0.002	0.00121 J	0.00125 J	AbsD = 0.00004	None; all criteria were met.
Hardness	0.54	242.0	255.6	RPD = 5.5	
Dissolved Chromium	0.001	0.0002 J	0.0002 J	AbsD = 0	
Dissolved Nickel	0.002	0.0015 J	0.0016 J	AbsD = 0.0001	
Total Cyanide	0.005	0.002 J	0.002 J	AbsD = 0	
Free Cyanide	0.010	0.005 J	0.010 U	AbsD = 0.005	

Field duplicate criteria are as follows:

- RPD ≤ 30 when positive results for both samples are ≥ 5x QL
- AbsD ≤ QL when one or both results are < 5x QL

Sample Results and Reported Quantitation Limits

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

Sample FIELD BLANK-031225 was diluted 1.1-fold for oil and grease likely due to sample volume available for analysis. There were no other dilutions performed on the samples in this data set.

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

Data Validation Report

Site: SPS Technologies, Surface Water Sampling
Laboratory: Pace Analytical, Westborough and Mansfield, MA
SDG No.: L2514480
Parameters: Select Volatile Organic Compounds (VOCs), Select Metals, Hardness, Total Cyanide, Free Cyanide, Oil & Grease, Hexavalent Chromium, Trivalent Chromium
Data Reviewer: Kristen Morin/TRC
Peer Reviewer: Jessica Esser/TRC
Date: March 14, 2025

Samples Reviewed and Evaluation Summary

6 Surface Water Samples:	SW1-031325, SW2-031325, SW3-031325, SW4-031325, SW5-031325, DUP-031325[1]
1 Field Blank:	FIELD BLANK-031325
1 Trip Blank:	TBSW-031325

[1]Field duplicate of SW3-031325

The above-listed samples were collected on March 13, 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. Qualifications applied to the data as a result of sampling error are discussed below.

- The positive results for dissolved chromium were qualified as nondetect (U) in samples SW1-031325, SW3-031325, SW4-031325, and DUP-031325 due to field blank contamination. These results can be used for project objectives as nondetects, which should not have an impact on the data usability.

- The results for dissolved and total chromium in sample FIELD BLANK-031325 were qualified as estimated (J/UJ) due to the dissolved concentration being significantly higher than the total concentration. These results can be used for project objectives as an estimated value and as a nondetect with an estimated QL, which may have a minor impact on the data usability.

Qualifications applied to the data as a result of analytical error are discussed below.

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

Data Completeness

The data package was a complete Level 2 data package. It should be noted that the date of collection for the trip blank was listed as 3/9/25 on the chain-of-custody. 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. With the exception of dissolved chromium, target analytes were not detected in the field blank. Dissolved chromium was detected in the field blank at a concentration of 0.0065 mg/L. The positive results for dissolved chromium in samples SW1-031325, SW3-031325, SW4-031325, and DUP-031325 were qualified as nondetect (U) at the QL since the results were < the QL. Qualification of the data was not required for dissolved chromium in the remaining surface water samples in this data set since dissolved chromium was not detected in these samples.

Surrogate Recoveries (VOCs only)

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample SW4-031325 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 SW4-031325 for total cyanide, free cyanide, and hexavalent chromium. All criteria were met.

LCS Results

All criteria were met for all parameters.

Field Duplicate Results

Samples SW3-031325 and DUP-031325 were submitted as the field duplicate pair with this sample set. The following table summarizes the relative percent differences (RPDs) and/or absolute differences (AbsDs), where applicable, of the detected analytes after validation. The QL was used in the calculation of the AbsD for nondetect (ND) results. All criteria were met.

Analyte	QLs (mg/L)	SW3-031325 (mg/L)	DUP-031325 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Chromium	0.001	0.00025 J	0.00033 J	AbsD = 0.00008	None; all criteria were met.
Total Nickel	0.002	0.00090 J	0.00085 J	AbsD = 0.00005	
Hardness	0.54	226.2	222.0	RPD = 1.9	
Dissolved Nickel	0.002	0.0009 J	0.0009 J	AbsD = 0	
Total Cyanide	0.005	0.002 J	ND	AbsD = 0.003	

Field duplicate criteria are as follows:

- RPD ≤ 30 when positive results for both samples are ≥ 5x QL
- AbsD ≤ QL when one or both results are < 5x QL

Sample Results and Reported Quantitation Limits

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

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 ≤ 20% when dissolved results are greater than total results and both results are ≥ 5x the QL. If the dissolved result was > the total and one or both results were < 5x the QL, then the AbsD should be ≤ 2x the QL. With the exception of chromium, these criteria were met for all results. The result for dissolved chromium in sample FIELD BLANK-031325 (0.0065 mg/L) was higher than the associated total concentration (nondetect at 0.00100 mg/L) and the AbsD (0.0055 mg/L) between the results was >2x the QL (0.00200 mg/L). Therefore, the positive result for dissolved chromium was qualified as estimated (J) and the nondetect result for total chromium was qualified as estimated (UJ) in this sample.

Data Validation Report

Site: SPS Technologies, Surface Water Sampling
Laboratory: Pace Analytical, Westborough and Mansfield, MA
SDG No.: L2514870
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 16, 2025

Samples Reviewed and Evaluation Summary

6 Surface Water Samples: SW1-031425, SW2-031425, SW3-031425, SW4-031425, SW5-031425, DUP-031425[1]

1 Trip Blank: TBSW-031425

[1]Field duplicate of SW3-031425

The above-listed samples were collected on March 14, 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 and hexavalent chromium results that were below the lowest calibration standard and QL. These results were qualified as estimated (J) by the laboratory in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

- The positive results for total cyanide were qualified as nondetect (U) in samples SW3-031425, SW4-031425, and DUP-031425 due to method blank contamination. These results can be used for project objectives as nondetects, which should not have an 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 3/13/25 on the chain-of-custody; the laboratory logged in the collection date for this sample as 3/14/25 (i.e., the same date of collection as the associated samples). For purposes of this assessment, it was assumed the date of collection was the same as the associated samples and the laboratory was not contacted about this discrepancy. It should also be noted that two containers for sample SW4-031425 were labeled SW5-031425; the laboratory logged in these two containers as SW4-031425. All samples are grouped in zip-loc bags, and it was assumed that the issue was due to pen smearing. No validation actions were taken on this basis.

Holding Times and Sample Preservation

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

Blanks

Target VOCs were not detected in the trip blank. A field blank was not submitted with the data set. With the exception of total cyanide, target analytes were not detected in the associated laboratory method blanks. Total cyanide was detected in the laboratory method blank associated with all samples in this data set at a concentration of 0.002 J mg/L. The positive results for total cyanide in samples SW3-031425, SW4-031425, and DUP-031425 were qualified as nondetect (U) at the QL since the results were < the QL. Qualification of the data was not required for total cyanide in the remaining surface water samples in this data set since total cyanide was not detected in these samples.

Surrogate Recoveries (VOCs only)

All criteria were met.

MS/MSD Results

MS/MSD analyses were performed on sample SW5-031425 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 SW5-031425 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 SW3-031425 and DUP-031425 were submitted as the field duplicate pair with this sample set. The following table summarizes the relative percent differences (RPDs) and/or absolute differences (AbsDs), where applicable, of the detected analytes after validation. The QL was used in the calculation of the AbsD for nondetect (ND) results. All criteria were met.

Analyte	QLs (mg/L)	SW3-031425 (mg/L)	DUP-031425 (mg/L)	RPD (%) or AbsD (mg/L)	Validation Action
Total Chromium	0.001	0.00032 J	0.00032 J	AbsD = 0	None; all criteria were met.
Total Nickel	0.002	0.00087 J	0.00138 J	AbsD = 0.00051	
Hardness	0.54	221.1	219.1	RPD = 0.9	
Dissolved Chromium	0.001	0.0003 J	0.0003 J	AbsD = 0	
Dissolved Nickel	0.002	0.0009 J	0.0008 J	AbsD = 0.0001	
Hexavalent Chromium	0.010	ND	0.004 J	AbsD = 0.006	

Field duplicate criteria are as follows:

- RPD ≤ 30 when positive results for both samples are ≥ 5x QL
- AbsD ≤ QL when one or both results are < 5x QL

Sample Results and Reported Quantitation Limits

Select metals, hexavalent chromium, and total cyanide results were reported that were below the lowest calibration standard level and QL. These results were qualified as estimated (J) in the associated samples by the laboratory. Note that positive results for total cyanide were subsequently qualified as nondetect (U) due to method blank contamination as noted above.

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 ≤ 20% when dissolved results are greater than total results and both results are ≥ 5x the QL. If the dissolved result was > the total and one or both results were < 5x the QL, then the AbsD should be ≤ 2x the QL. These criteria were met for all results.