November 4, 2024

Ms. Erin Endsley
Hydrogeologist Program Coordinator
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
1701 N. 4th St
Superior, WI 54880

Subject: **Fall 2024 Residential Well Groundwater Quality Analytical Results**
Round 57 Long Term Groundwater Monitoring Event
Spickler Landfill Site
Marshfield, Wisconsin
EPA ID# WID980902969

Dear Ms. Endsley:

On September 27, 2024, WSP completed the residential well sampling as part of the Round 57 Long-term Groundwater Monitoring Event at the Spickler Landfill, Spencer, Wisconsin. During the fall event, Residential Wells RW-2550 and RW-2551 were sampled, a trip blank was analyzed, and a duplicate sample was collected. Access was not granted to sample residential well RW-2543.

The residential well samples were analyzed by Pace Analytical Services, Inc. (Pace) at their Green Bay, Wisconsin, Minneapolis, Minnesota, and Mt. Juliet, Tennessee facilities, and CT Laboratories in Baraboo, Wisconsin. The data were reviewed against the Quality Assurance Project Plan (QAPP), Spickler Landfill Site, Marathon County, Wisconsin dated October 7, 2021, as updated, to confirm that the sampling and analysis meets the objectives of the QAPP.

The analytical results from Round 57 Residential Well Sampling are summarized on the attached Table 1 for Organic Compounds, Table 2 for Inorganic Compounds, and Table 3 for per-and polyfluoroalkyl substances (PFAS). The volatile organics analyzed using Methods 8260 and 8260 SIM (low-level vinyl chloride) were not detected above the respective limits of quantitation (LOQ) in the samples collected from RW-2550, its duplicate, and RW-2551.

The semi-volatile organic 1,4-dioxane, analyzed using Method 8270C-mod (Method 8270-SIM), was detected in residential well RW-2550 and its duplicate sample at concentrations of 1.06 and 1.17 micrograms per liter (µg/L), respectively. The detected concentrations are above the Preventative Action Limit (PAL) of 0.3 µg/L but below the Enforcement Standard (ES) of 3 µg/L. 1,4-Dioxane was not detected in residential well sample RW-2551. These detections are consistent with historical data.

Inorganic constituents were detected below their respective PALs in the RW-2551 sample. Detections of total lead were reported slightly above the PAL but below the ES in the sample from

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RW-2550 and its duplicate. Total iron was reported in the sample from RW-2550 and its duplicate at concentrations above the ES. These detections are consistent with historical data. The lead detections are likely due to the water coming in contact with household plumbing/piping that contains lead while iron is naturally occurring in the area.

PFAS compounds, analyzed using EPA Method 537.1, were not detected in the RW-2551 sample. Concentrations of PFBS, PFHxS and PFHxA, ranging from an estimated concentration of 2.1 nanograms per liter (ng/L) to an estimated concentration of 2.6 ng/L, were detected in the RW-2550 sample and its duplicate. The PFAS constituents were not detected at concentrations that exceed the new EPA Final Maximum Contaminant Level (MCL), (April 10, 2024), or EPA Tapwater Regional Screening Levels (RSLs), as applicable. No other PFAS constituents were detected in the sample from RW-2550 or its duplicate.

The data have been validated by the laboratory and by our Senior Quality Assurance Chemist and have been found to be acceptable. Attached to this letter is the Data Quality Review, the Pace Report of Laboratory Analysis with validation qualifiers noted as appropriate, and the chain-of-custody record.

If you have any questions regarding this report, please contact Alison Levinson at (770) 973-2100.

Sincerely,
WSP USA Inc.

Alison Levinson, P.G.
License No. 1319-13
Senior Geologist

Carol D. Northern
Project Principal

CC: Mr. Dale Wonn, Weyerhaeuser Company
Mr. Matt Vitale, WDNR
Ms. Nilia Green, EPA Region 5

Attachments:
Tables 1, 2, and 3
Data Quality Review
Pace Laboratory Analytical Report
Chain-of-custody

TABLE 1
LONG-TERM GROUNDWATER MONITORING
ORGANIC COMPOUND SUMMARY
RESIDENTIAL MONITORING WELLS
SPICKLER LANDFILL

Parameter	UNITS	NR140 PAL	NR140 ES	SLLT-RW2550 (WDNR Pt. ID No. 804)	SLLT-RW2550 DUP (WDNR Pt. ID No. 804)	SLLT-RW2551 (WDNR Pt. ID No. 802)
				LTGWM	LTGWM	LTGWM
				Rnd 57	Rnd 57	Rnd 57
				09/27/2024	09/27/2024	09/27/2024
1,1-Dichloroethane	ug/L	85.0	850	<1.0	<1.0	<1.0
1,2-Dichloroethane	ug/L	0.5	5	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	ug/L	15	75	<1.0	<1.0	<1.0
Benzene	ug/L	0.5	5	<1.0	<1.0	<1.0
Chloroethane	ug/L	80	400	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	ug/L	7	70	<1.0	<1.0	<1.0
Methylene chloride	ug/L	0.5	5	<5.0	<5.0	<5.0
Tetrachloroethene (PCE)	ug/L	0.5	5	<1.0	<1.0	<1.0
Trichloroethene (TCE)	ug/L	0.5	5	<1.0	<1.0	<1.0
Vinyl chloride (low-level)	ug/L	0.02	0.2	<0.10	<0.10	<0.10
1,4-Dioxane	ug/L	0.3	3	**1.06**	**1.17**	<0.3

Notes:

Laboratory analyses performed by Pace Analytical Services and CT Labs

< = constituent not detected at or above the specified limit of quantitation (LOQ)

J - estimated concentration

PAL- Preventive Action Limit

ES- Enforcement Standard

ug/L- micrograms per liter

Prepared By: AGL 10/31/2024

Checked By: CDN 10/31/2024

TABLE 2
LONG-TERM GROUNDWATER MONITORING
INORGANIC COMPOUND SUMMARY
RESIDENTIAL MONITORING WELLS
SPICKLER LANDFILL

PARAMETER	UNITS	NR140 PAL	NR140 ES	SLLT-RW2550 (WDNR Pt. ID No. 804)	SLLT-RW2550 DUP (WDNR Pt. ID No. 804)	SLLT-RW2551 (WDNR Pt. ID No. 802)
				LTGWM	LTGWM	LTGWM
				Rnd 57	Rnd 57	Rnd 57
				09/27/2024	09/27/2024	09/27/2024
Arsenic, total	ug/L	1	10	<1.0	<1.0	<1.0
Barium, total	ug/L	400	2000	**20.5**	**19.8**	**9.1**
Iron, total	ug/L	150	300	**7080**	**6770**	**106 J**
Lead, total	ug/L	1.5	15	**8.5**	**6.8**	**1.0**
Manganese, total	ug/L	60	300	**30.5**	**30.1**	**5.0**

Notes:
Laboratory analyses peformed by Pace Analytical Services
J - Estimated concentration
< = constituent not detected at or above the specified limit of quantitation (LOQ)
ug/L- micrograms per liter
PAL- Preventive Action Limit
ES- Enforcement Standard

Prepared By: AGL10/31/2024
Checked By: CDN 10/31/2024

TABLE 3
LONG-TERM GROUNDWATER MONITORING
PFAS SUMMARY
RESIDENTIAL MONITORING WELLS
SPICKLER LANDFILL

PARAMETER	UNITS	Current Regulatory Guidance	SLLT-RW2550 (WDNR Pt. ID No. 804)	SLLT-RW2550 DUP (WDNR Pt. ID No. 804)	SLLT-RW2551 (WDNR Pt. ID No. 802)
			LTGWM	LTGWM	LTGWM
			Rnd 57	Rnd 57	Rnd 57
			09/27/2024	09/27/2024	09/27/2024
Hexafluoropropylene oxide-dimer Acid (HFPO-DA)	ng/L	10*	<3.9	<3.9	<2.1
N-ethyl perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ng/L	NG	<3.9	<3.9	<2.1
N-methyl perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ng/L	NG	<3.9	<3.9	<2.1
Perfluorobutanesulfonic Acid (PFBS)	ng/L	600**	**2.4 J**	**2.6 J**	<1.9
Perfluorodecanoic Acid (PFDA)	ng/L	NG	<3.9	<3.9	<2.1
Perfluorododecanoic Acid (PFDoA)	ng/L	100**	<3.9	<3.9	<2.1
Perfluoroheptanoic Acid (PFHpA)	ng/L	NG	<3.9	<3.9	<2.1
Perfluorohexanesulfonic Acid (PFHxS)	ng/L	10*	**2.1 J**	**2.3 J**	<1.9
Perfluorohexanoic Acid (PFHxA)	ng/L	990**	**2.2 J**	**2.2 J**	<2.1
Perfluorononanoic Acid (PFNA)	ng/L	10*	<3.9	<3.9	<2.1
Perfluorooctanesulfonic Acid (PFOS)	ng/L	4*	<3.6	<3.6	<2.0
Perfluorooctanoic Acid (PFOA)	ng/L	4*	<3.9	<3.9	<2.1
Perfluorotetradecanoic Acid (PFTeDA)	ng/L	2000**	<3.9	<3.9	<2.1
Perfluorotridecanoic Acid (PFTrDA)	ng/L	NG	<3.9	<3.9	<2.1
Perfluoroundecanoic Acid (PFUnA)	ng/L	NG	<3.9	<3.9	<2.1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ng/L	NG	<3.6	<3.7	<2.0
9-chlorohexadecafluoro-3-oxanone-1-sulfonic Acid (9Cl-PF3ONS)	ng/L	NG	<3.6	<3.6	<2.0
4,8-dioxa-3H-perfluorononanoic Acid (ADONA)	ng/L	NG	<3.7	<3.7	<2.0

Notes:

Prepared By: AGL10/31/2024
Checked By: CDN 10/31/2024

Laboratory analyses peformed by Pace Analytical Services

< = constituent not detected at or above the specified limit of quatitation (LOQ)

J- estimated concentration

*EPA Maximum Contaminant Level (MCL), April 10, 2024

**EPA Regional Screening Level (RSL) for Tapwater (EPA Summary Table TR=1E-06, HQ=0.1; page 8, May 2024). Note that the table values were converted from ug/L to ng/L.

ng/L- nanograms per liter

NG- No guidance

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MEMORANDUM

TO: Alison Levinson, WSP USA

FROM: Kathy J. Gunderson, Senior Consultant, Chemical Scientist

DATE: October 30, 2024

SUBJECT: Data Quality Review of Residential Samples Collected September 2024

PROJECT: Site Monitoring, Spickler Landfill, Marathon County, Wisconsin

PROJECT #: 31403999.012-50

1.0 Introduction

This memorandum presents the Stage 2B (USEPA 2009a) validation of the analytical data from samples collected near the Spickler Landfill. Two residential water samples, one field duplicate, and one trip blank were collected September 27, 2024. The analyses were performed by Pace Analytical Services (Pace), in their Green Bay, Wisconsin, Minneapolis, Minnesota, and Mt. Juliet, Tennessee laboratories. Pace subcontracted the low-level vinyl chloride analyses to CT Laboratories of Baraboo, Wisconsin. The samples were analyzed for site-specific volatile organic compounds (VOCs), 1,4-dioxane, perfluoroalkyl substances (PFAS), and metals following the methods referenced in Table 1.

The quality assurance criteria used to assess the data are from the *Quality Assurance Project Plan Spickler Landfill Site Marathon County,* (EarthCon 2021), the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2020), the *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA 2020a), the *Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537* (USEPA 2018), the analytical methods, or the professional judgment of the validation chemist. The following laboratory deliverables were evaluated during the review process:

- Chain-of-custody (COC) documentation to assess holding times and verify report completeness
- Laboratory quality control (QC) sample results, including method blanks, surrogate spikes, internal standards, laboratory control sample/laboratory control sample duplicates (LCS/LCSDs), matrix spike/matrix spike duplicates (MS/MSDs), and laboratory duplicates
- Instrument calibration and performance checks
- Field QC samples to assess trip blank cleanliness and field duplicate precision

An assessment of the data quality is presented in Section 3.0, the QAPP data validation checklists are also included. Field duplicate precision is presented in Table 2 at the end of this memorandum.

2.0 Data Validation Findings

2.1 Custody, Preservation, and Completeness – Acceptable with Discussion

Sample custody was maintained from sample collection to receipt at the laboratory. The samples were received intact and were properly preserved. The report is complete and contains results for the samples and tests requested on the COC form.

- At WSP's request, the dissolved metals analyses requested on the COC were cancelled.

2.2 Volatile Organic Analyses

The field samples and trip blank were analyzed for the site-specific VOCs benzene, chloroethane, 1.4-dichlorobenzene, 1,1-dichloroethane, 1,2-dichloroethane, cis-1,2-dichloroethene, methylene chloride, tetrachloroethene, trichloroethene, and vinyl chloride by Method 8260 at Pace's Green Bay, Wisconsin facility. The field samples and trip blank were analyzed for low-level vinyl chloride via Method 8260C by CT Laboratories.

2.2.1 Holding Times – Acceptable

The samples were analyzed within the QAPP holding time of 14 days from collection for preserved water samples.

2.2.2 Instrument Tuning and Mass Calibration – Acceptable

The mass spectrometer tuning compound bromofluorobenzene was analyzed at the required frequency by both laboratories. The relative abundance values are within Functional Guidelines criteria.

2.2.3 Initial Calibration – Acceptable

Initial calibrations were analyzed at the required frequency by both laboratories. The QAPP criteria of relative standard deviation (RSD) values less than or equal to 15 percent or correlation coefficient greater than 0.99 or coefficient of determination greater than 0.99 were met. The relative response factors are greater than the QAPP criterion of 0.010.

2.2.4 Calibration Verification – Acceptable

Calibration verification standards were analyzed at the required frequency by both laboratories. The QAPP criteria of percent difference values less than or equal to 20 and relative response factors greater than 0.010 was met.

2.2.5 Blank Analyses – Acceptable

2.2.5.1 Method Blanks

Method blanks were analyzed at the required frequency by both laboratories. Target VOCs were not detected above the limits of detection (LOD, aka, method detection limits).

2.2.5.2 Trip Blanks – Acceptable

One trip blank is associated with the samples and analyzed by both laboratories. Target VOCs were not detected above the LOD in the trip blank.

2.2.6 Surrogate Analyses – Acceptable

Surrogate compounds were added to the samples, blanks, and QC samples as required. The recovery values are within the laboratory control limits.

2.2.7 Laboratory Control Sample Analyses – Acceptable

Pace analyzed LCSs and CT Laboratories analyzed LCS/LCSDs at the required frequency. The recovery and relative percent difference (RPD) values are within the laboratory control limits.

2.2.8 Matrix Spike/Matrix Spike Duplicate Analyses – Acceptable with Discussion

Except as noted below, MS/MSDs were reported as required. The recovery and relative percent difference (RPD) values are within the laboratory control limits.

- MS/MSD results were not reported by CT Laboratories for the low-level vinyl chloride analyses. Data qualifiers are not required due to the lack of laboratory QC results.

2.2.9 Internal Standard Evaluation – Acceptable

Internal standards were added to the samples, blanks, and QC samples as required. The recovery and retention time criteria of Functional Guidelines were met.

2.2.10 Laboratory Reporting Limits – Acceptable with Discussion

The VOCs and target reporting limits (RLs) listed in Table 2 of the QAPP were reported, with one exception.

- The low-level vinyl chloride RL listed in the QAPP is 0.06 μg/L. CT Laboratories limit of quantitation (LOQ, aka RL) is 0.10 μg/L. The laboratory LOD is 0.019, which is lower than the preventive action limit for the project of 0.02 μg/L.

2.2.11 Field Duplicates – Acceptable

Sample SLLT-RWDUP01-5799 is a field duplicate of sample SLLT-RW-2550-5701. The QAPP criterion for field duplicate precision is RPD values less than or equal to 30. RPD values could not be calculated because VOCs were not detected in either sample.

2.2.12 Overall Assessment of Data Usability

The usability of the data is based on the EPA guidance documents noted previously. Upon consideration of the information presented here, the data are acceptable for their intended use.

2.3 Semivolatile Organic Analyses

The samples and the field duplicate were analyzed for 1,4-dioxane (1,4-D) by Method 8270D selected ion monitoring (SIM) by Pace in Mt. Juliet, Tennessee.

2.3.1 Holding Times – Acceptable

The samples were extracted within the Method holding time of seven days from collection. The sample extracts were analyzed within the Method holding time of 40 days from extraction.

2.3.2 Instrument Tuning and Mass Calibration – Acceptable

The tuning compound decafluorotriphenylphosphine was analyzed at the required frequency and the relative abundance values are within Functional Guidelines criteria.

2.3.3 Initial Calibration – Acceptable

Initial calibrations were analyzed at the required frequency. The QAPP criteria of RSD values less than or equal to 15 percent and relative response factors greater than 0.010 were met.

2.3.4 Calibration Verification – Acceptable

Calibration verification standards were analyzed at the required frequency. The QAPP criteria of percent difference values less than or equal to 20 and relative response factors greater than 0.010 was met.

2.3.5 Blank Analyses – Acceptable

Method blanks were analyzed at the required frequency of one per extraction batch. 1,4-D was not detected in the method blank above the LOD.

2.3.6 Surrogate Analyses – Acceptable

Surrogate compounds were added to the samples, blanks, and QC samples as required. The recovery values are within the laboratory control limits.

2.3.7 Laboratory Control Sample Analyses – Acceptable

An LCS/LCSD was analyzed at the required frequency of one per extraction batch. The recovery and RPD values are within the laboratory control limits.

2.3.8 Matrix Spike/Matrix Spike Duplicate Analyses – Acceptable with Discussion

MS/MSDs were not reported as discussed below.

- MS/MSD results were not reported with the 1,4-D analyses. Data qualifiers are not required due to the lack of laboratory QC results.

2.3.9 Isotope Dilution and Internal Standard Evaluation – Acceptable

Isotope dilution standards and internal standards were added to the samples, blanks, and QC samples. The internal standard recovery and retention time criteria of Functional Guidelines were met. The laboratory criteria for isotope dilution standards were met.

2.3.10 Laboratory Reporting Limits – Acceptable

The 1,4-D reporting limit listed in QAPP Table 2 was met.

2.3.11 Field Duplicates – Acceptable

Sample SLLT-RWDUP01-5799 is a field duplicate of sample SLLT-RW-2550-5701. The QAPP criterion for field duplicate precision is RPD values less than or equal to 30. The field duplicate precision is acceptable as shown in Table 2.

2.3.12 Overall Assessment of Data Usability

The usability of the data is based on the EPA guidance documents noted previously. Upon consideration of the information presented here, the data are acceptable for their intended use.

2.4 Metals Analyses

The samples and field duplicate were analyzed for total arsenic, barium, iron, manganese, and lead by Method 3010A/6020B.

2.4.1 Holding Times – Acceptable

The samples were analyzed within the QAPP holding time of 180 days from collection.

2.4.2 Initial Calibration – Acceptable

Initial calibrations and detection limit standards were analyzed daily prior to sample analysis. The QAPP linearity criterion of correlation coefficient greater than or equal to 0.998 and detection limit standard recovery criterion of 80 to 120 precent were met.

2.4.3 Calibration Verifications – Acceptable

Initial calibration verification standards and continuing calibration verification standards were analyzed at the required frequency. The QAPP criteria of 90 to 110 percent recovery was met.

2.4.4 Blank Analyses – Acceptable

2.4.4.1 Calibration Blanks

Initial and continuing calibration blanks were analyzed at the required frequency. Target metals were not detected above the MDLs in the calibration blanks.

2.4.4.2 Method Blanks

Method blanks were analyzed at the required frequency of one per digestion batch. Target metals were not detected above the MDLs in the method blanks.

2.4.5 ICP Interference Check – Acceptable

ICP interference check samples were analyzed prior to sample analysis. The recovery values of spiked metals are within the QAPP criteria of 80 to 120 percent and the non-spiked metals have absolute values less than one half the reporting limits.

2.4.6 Laboratory Control Sample Analyses – Acceptable

LCSs were analyzed at the required frequency of one per digestion batch. The recovery values are within the laboratory control limits of 80 to 120 percent.

2.4.7 Spiked Sample Analyses – Acceptable

Matrix spike and post digestion spike analyses were performed at the required frequency of one per 20 samples. The recovery values are within the laboratory control limits.

2.4.8 Laboratory Duplicate Analyses – Acceptable

Duplicate sample analyses, in the form of MSDs, were performed at the required frequency of one per 20 samples. The RPD values are within the laboratory control limits.

2.4.9 ICP Serial Dilution Analysis – Acceptable

Serial dilutions were performed at a frequency of one per batch. The Functional Guidelines criteria of percent difference values less than 10 percent for results greater than 50 times the MDL were met.

2.4.10 Internal Standard Evaluation – Acceptable

Internal standards were added to the samples, blanks, and QC samples as required. The recovery criterion of Functional Guidelines (60 to 125 percent) was met.

2.4.11 Laboratory Reporting Limits – Acceptable

The project metals were reported and the detection limits listed in Table 2 of the QAPP were met.

2.4.12 Field Duplicates – Acceptable

Sample SLLT-RWDUP01-5799 is a field duplicate of sample SLLT-RW-2550-5701. The QAPP precision criterion for field duplicates is RPD values less than or equal to 30. Field duplicate precision is acceptable as shown by the low RPD values listed in Table 2.

2.4.13 Overall Assessment of Data Usability

The usability of the data is based on the EPA guidance documents noted previously. Upon consideration of the information presented here, the data are acceptable for their intended use.

2.5 Perfluoroalkyl Substances Analyses

The samples and the field duplicate were analyzed for perfluoroalkyl substances (PFAS) via Method 537.1 by Pace in Minneapolis, Minnesota.

2.5.1 Holding Times – Acceptable

The samples were extracted within the QAPP time of 28 days from collection. The sample extracts were analyzed within the QAPP holding time of 28 days from extraction.

2.5.2 Initial Calibration – Acceptable

Initial calibrations were analyzed at the required frequency. The RSD values are acceptable at less than 12 precent. The QAPP criteria of 50 to 150 percent recovery for low level standards and 70 to 130 precent for standards above the reporting limits were not summarized in the data package. Data quality is not affected.

2.5.3 Calibration Verification – Acceptable

Initial calibration verification and continuing calibration verification standards were analyzed at the Method frequency. The QAPP criteria of 50 to 150 percent recovery for low level standards and 70 to 130 precent for standards above the reporting limits were met.

2.5.4 Blank Analyses – Acceptable

2.5.4.1 Method Blanks

Method blanks were analyzed at the required frequency of one per extraction batch. PFAS was not detected above the MDLs in the method blank.

2.5.5 Surrogate Analyses – Acceptable with Discussion

Surrogate compounds were added to the samples, blanks, and QC samples as required. The recovery values are within the laboratory control limits of 70 to 130 percent, except as noted below.

- The 13C3-HFPO-DA surrogate recovery value for the matrix spike associated with the samples is below the laboratory control limits at 51 percent. Data qualifiers are not required because a non-project sample was analyzed as the matrix spike.

2.5.6 Laboratory Control Sample/Laboratory Control Duplicate Analyses – Acceptable

LCSs were analyzed at the Method frequency of one LCS and one low level LCS per extraction batch. The recovery values are within the Method criteria of 70 to 130 percent and 50 to 150 percent for the low level LCS. The RPD values are within the laboratory criteria of less than 30 percent.

2.5.7 Matrix Spike/Matrix Spike Duplicate Analyses – Acceptable with Discussion

A matrix spike and duplicate were analyzed to satisfy the MS/MSD requirement of the method. A non-project sample was extracted and analyzed as the MS/duplicate. The recovery and RPD values are acceptable, except as noted below.

- Several recovery values are below criteria; however, project samples are not qualified based on non-project QC results.

2.5.8 Internal Standard Evaluation – Acceptable

Internal standards were added to the samples, blanks, and QC samples as required. The internal standard area recovery values are within the Method criteria of 50 to 200 percent.

2.5.9 Laboratory Reporting Limits – Acceptable

The PFAS compounds listed in Table 4 of the QAPP were reported and the target detection limits were met.

2.5.10 Field Duplicates – Acceptable

Sample SLLT-RWDUP01-5799 is a field duplicate of sample SLLT-RW-2550-5701. The QAPP criterion for field duplicate precision is RPD values less than or equal to 30. Field duplicate precision is acceptable as shown in Table 2.

2.5.11 Overall Assessment of Data Usability

The usability of the data is based on the EPA guidance documents noted previously. Upon consideration of the information presented here, the data are acceptable for their intended use.

3.0 Assessment of Data Quality Objectives

3.1 Accuracy

Accuracy is the degree of agreement between a measurement and the accepted reference or true value. The level of accuracy is determined by examination of surrogates, internal standards, isotope dilution standards, MS/MSDs, LCSs, method blanks, field blanks, and trip blanks, as appropriate. The surrogate, MS/MSD, and LCS recovery values were compared to the laboratory QC limits. Method blanks, field blanks, and trip blanks are analyzed to identify compounds that could be introduced during the sampling, laboratory preparation, or analysis phase (i.e., laboratory contaminants) and lead to inaccurate results.

The accuracy of the VOC data is good. The surrogate, internal standard, LCS, and project MS/MSD recovery values are within the laboratory QC limits and the method blanks and trip blank are free of target analytes.

The accuracy of the SVOC 1,4-D data is good. The surrogate, LCS, internal standard, and isotope dilution recovery values are within the laboratory control limits and 1,4-D was not detected in the method blank.

The accuracy of the metals data is very good. The internal standard, LCS, and MS/MSD recovery values are within the laboratory QC limits and the method blank is free of target metals.

The accuracy of the PFAS data is good. The internal standard and LCS/LCSD recovery values are within the laboratory QC limits and PFAS were not detected in the method blank. One surrogate recovery value and several MS recovery values are below criteria in the matrix spike analysis associated with the samples. Data accuracy is not affected because a non-project sample was utilized as the matrix spike.

3.2 Precision

Precision is a measure of the mutual agreement among individual measurements of the same property, under prescribed similar conditions. Precision is determined through analysis of MS/MSDs, sample duplicates, and field duplicate samples. Duplicate samples are evaluated for precision in terms of RPD. RPD is defined as the difference between the duplicate results divided by the mean and expressed as a percent.

The precision of the VOC and the 1,4-D data is very good. The field duplicate, LCS/LCSD, and MS/MSD RPD values are acceptable.

The precision of the total metals is very good. The RPD values of the MS/MSD and field duplicate are acceptable.

The precision of the PFAS data is very good. The RPD values of the laboratory duplicate are within the laboratory QC limits and the field duplicate RPD values are acceptable.

3.3 Representativeness

Representativeness is the extent to which the data reflect the actual contaminant levels present in the samples. Representativeness is assessed through method and field blanks, and proper preservation and handling. Method and field blank analyses allow for the detection of artifacts that may be reported as false positive results. Proper sample preservation and handling ensure that sample results reflect the actual sample concentrations.

The data are assumed to be representative because the samples were properly preserved and handled, the samples were prepared and analyzed within the required holding times, and the method blanks and trip blank are free of target compounds.

3.4 Comparability

Comparability is a measure of how easily the data set can be compared and combined with other data sets. The data are assumed to be comparable as standard EPA methods were used to analyze the samples, the method QC criteria were generally met, and routine detection limits were reported.

3.5 Completeness

Completeness is expressed as the ratio of valid results to the amount of data expected to be obtained under normal conditions. Completeness is determined by assessing the number of samples for which valid results were obtained versus the number of samples that were submitted to the laboratory for analysis. Valid results are results that are determined to be usable during the data validation review process.

The completeness of the Spickler Landfill residential data collected in September 2024 is 100 percent, which meets the QAPP completeness goal of greater than 95 percent.

4.0 Data Qualifier Definitions

4.1 Inorganic Data Qualifiers

The following data validation qualifiers were used in the review of this data set. These qualifiers are from the *National Functional Guidelines for Inorganic Superfund Methods Data Review*.

U The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.

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

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample

4.2 Organic Data Qualifiers

The following data validation qualifiers were used in the review of the organic analyses in this data set. These qualifiers are from the *National Functional Guidelines for Organic Superfund Methods Data Review*.

U The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.

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

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

NJ The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

5.0 References

EarthCon. 2021. Quality Assurance Project Plan Spickler Landfill Site Marathon County, Wisconsin, Revision 0. Prepared for Settling Defendants Seattle, Washington. Prepared by EarthCon Consultants, Inc. Marietta, Georgia. October 7, 2021.

USEPA. 1996. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) Third Edition, Updates I, II, IIA, IIB, and III. United States Environmental Protection Agency. Office of Solid Waste. December 1996.

USEPA. 2009. Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction, and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) Office of Research and Development U.S. Environmental Protection Agency. EPA/600/R-08/092. September 2009.

USEPA. 2009a. Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use. Office of Solid Waste and Emergency Response. EPA 540-R-08-005. January 13, 2009.

USEPA 2018. Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537. United States Environmental Protection Agency. EPA 910-18-001. November 2018.

USEPA. 2020. National Functional Guidelines for Inorganic Superfund Methods Data Review. United States Environmental Protection Agency Office of Superfund Remediation and Technology innovation (OSTRI). EPA 542-R-20-006. November 2020.

USEPA. 2020a. National Functional Guidelines for Organic Superfund Methods Data Review. U.S. Environmental Protection Agency Office of Superfund Remediation and Technology innovation (OSTRI). EPA 540-R-20-005. November 2020.

Table 1 – Sample Data Reviewed

Field ID	Laboratory ID	VOCs	VC	1,4-D	Total Metals	PFAS
SLLT-RW-2551-5701	40284883001	X	X	X	X	X
SLLT-RW-2550-5701	40284883002	X	X	X	X	X
SLLT-RWDUP01-5799	40284883003	X	X	X	X	X
SLLT-RW-TB01-5701	40284883004	X	X			

VOCs – Volatile Organic Compounds by Method 8260 (USEPA 1996)
VC – Vinyl chloride by Method 8260C (USEPA 1996)
1,4-D – 1,4-dioxane by Method 3510C/8270D SIM (USEPA 1996)
Total Metals – arsenic, barium, iron, lead, and manganese by Method 3010A/6020B (USEPA 1996)
PFAS – Perfluoroalkyl substances by Method 537.1 (USEPA 2009)

Table 2 – Field Duplicate Precision

		SLLT-RW-2550-5701	SLLT-RWDUP01-5799	
Analyte	**Units**	**Results**	**Results**	**RPD**
PFBS	ng/L	2.4	2.6	8.0
PFHxA	ng/L	2.2	2.2	0
PFHxS	ng/L	2.1	2.3	9.1
Barium, total	ug/L	20.5	19.8	3.5
Iron, total	ug/L	7080	6770	4.5
Lead, total	ug/L	8.5	6.8	22.2
Manganese, total	ug/L	30.5	30.1	1.3
1,4-Dioxane (p-Dioxane)	ug/L	1.06	1.17	9.8

RPD – Relative percent difference

Text and tables reviewed by: CLC 10/30/24

STAGE 2B
ORGANIC ANALYSIS VALIDATION CHECKLIST

Client:	WSP Project Number: 31403999.006
Site/Project Name: Spickler Landfill Residential	Laboratory/Location: Pace & CT Laboratories
Sample Collection Dates: September 2024	Function Guidelines Revision: 2020
Method: 8260, 8260C, 3510C/8270D SIM	QAPP/SAP: 2021
Validated by/date: KJG 10/28/24	Reviewed by/date: CLC 10/30/24

Use the following checklist to document the Stage 2B validation of the above-mentioned data. Identify the criteria used, deviations from project documents, and qualified results. Attach support documentation and additional sheets as needed.

Parameter	Criteria	Acceptable	Unacceptable	Comment
Custody Maintained	--	X		
Condition upon Receipt	--	X		
VOA Vial Headspace	--	X		
Sample Preservation - Temperature	QAPP	X		
Sample Preservation – Chemical	QAPP	X		
Holding Times – Preparation	QAPP	X		
Holding Times - Analysis	QAPP	X		
Method Blank Results	QAPP	X		
Trip/Field Blank Results	QAPP	X		
Surrogate Recovery	QAPP	X		
LCS	QAPP	X		
MS/MSD – Recovery	QAPP	X		See Sections 2.3.8
MS/MSD - RPD	QAPP	X		
Field Duplicate	QAPP	X		
Detection Limit/Sensitivity	QAPP	X		See Section 2.2.10
Mass Tuning	QAPP	X		
GC Instrument Performance – Resolution & DDT/Endrin Breakdown	QAPP	X		
Initial Calibrations	QAPP	X		
Continuing Calibrations	QAPP	X		
Internal Standards	QAPP	X		
Retention Time Shifts	QAPP	X		
Multiple Dilutions/Analyses	QAPP	X		
Analytical Sequence	QAPP	X		
GC Column Agreement	NA	X		
Percent Solids	NA	X		
Deliverables Complete	--	X		
Other:				

Additional Comments:_

Results are useable for their intended purpose: ☐ With Qualification ☒ Without Qualification

STAGE 2B
ORGANIC ANALYSIS VALIDATION CHECKLIST

Client:	WSP Project Number: 31403999.006
Site/Project Name: Spickler Landfill Residential	Laboratory/Location: Pace Mt Juliet, TN
Sample Collection Dates: September 2024	Function Guidelines Revision: 2018
Method: PFAS 537.1	QAPP/SAP: 2021
Validated by/date: KJG 10/28/24	Reviewed by/date: CLC 10/30/24

Use the following checklist to document the Stage 2B validation of the above-mentioned data. Identify the criteria used, deviations from project documents, and qualified results. Attach support documentation and additional sheets as needed.

Parameter	Criteria	Acceptable	Unacceptable	Comment
Custody Maintained	--	X		
Condition upon Receipt	--	X		
VOA Vial Headspace	--	X		
Sample Preservation - Temperature	QAPP	X		
Sample Preservation - Chemical	QAPP	X		
Holding Times – Preparation	QAPP	X		
Holding Times - Analysis	QAPP	X		
Method Blank Results	QAPP	X		
Trip/Field Blank Results	QAPP	X		
Surrogate Recovery	QAPP	X		See Section 2.5.5
LCS	QAPP	X		See Section 2.5.6
MS/MSD – Recovery	QAPP	X		See Section 2.5.7
MS/MSD - RPD	QAPP	X		
Field Duplicate	QAPP	X		
Detection Limit/Sensitivity	QAPP	X		
Mass Tuning	QAPP	X		
Initial Calibrations	QAPP	X		
Continuing Calibrations	QAPP	X		
Internal Standards	QAPP	X		
Multiple Dilutions/Analyses	QAPP	X		
Percent Solids	NA			
Deliverables Complete	QAPP	X		
Other:				

Additional Comments:_____
_____
_____
_____
_____
_____
_____
_____

Results are useable for their intended purpose: ☐ With Qualification ☒ Without Qualification

STAGE 2B
INORGANIC ANALYSIS VALIDATION CHECKLIST

Client:	ECC Project Number: 31403999.006
Site/Project Name: Speckler Landfill Residential	Laboratory/Location: Pace Green Bay, WI
Sample Collection Dates: September 2024	Function Guidelines Revision: 2020
Method: Total metals 3010A/6020B	QAPP/SAP: 2021
Validated by/date: KJG 10/28/24	Reviewed by/date: CLC 10/30/24

Use the following checklist to document the Stage 2B validation of the above-mentioned data. Identify the criteria used, deviations from project documents, and qualified results. Attach support documentation and additional sheets as needed.

Parameter	Criteria	Acceptable	Unacceptable	Comment
Custody Maintained	--	X		
Condition upon Receipt	--	X		
Sample Preservation - Temperature	QAPP	X		
Sample Preservation - Chemical	QAPP	X		
Holding Times – Preparation	QAPP	X		
Holding Times - Analysis	QAPP	X		
Method Blank Results	QAPP	X		
Field Blank Results	QAPP	X		
LCS	QAPP	X		
MS/MSD – Recovery	QAPP	X		
Duplicate/MSD - RPD	QAPP	X		
PDS – Recovery	QAPP	X		
Serial Dilution	QAPP	X		
Field Duplicate	QAPP	X		
Detection Limit/Sensitivity	QAPP	X		
Initial Calibrations	QAPP	X		
Continuing Calibrations	QAPP	X		
Initial & Continuing Blanks	QAPP	X		
Low Level Standard	QAPP	X		
Internal Standards	QAPP	X		
Multiple Dilutions/Analyses	QAPP	X		
Analytical Sequence	QAPP	X		
Total ≥ Dissolved	NA			
Percent Solids	--	X		
Deliverables Complete	--	X		
Other:				

Additional Comments:_____
_____
_____
_____

Results are useable for their intended purpose: ☐ With Qualification ☒ Without Qualification

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

October 23, 2024

Alison Levinson
WSP USA
1880 West Oak Parkway, Bldg100
Suite 106
Marietta, GA 30062

RE: Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Dear Alison Levinson:

Enclosed are the analytical results for sample(s) received by the laboratory on September 28, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Green Bay
- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Steven Mleczko
steve.mleczko@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Kathy Gunderson, WSP USA
Marie Weber-Goeke, WSP USA
Sofie Weber-Snapp, WSP USA

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CERTIFICATIONS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
GMP+ Certification #: GMP050884
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-21-8
Virginia VELAP Certification ID: 11873
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-21-00008
Federal Fish & Wildlife Permit #: 51774A

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487

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CERTIFICATIONS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Pace Analytical Services National

Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Mold Certification #: LAB0152
Texas Certification #: T 104704245-17-14
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: VT2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 998093910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

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SAMPLE SUMMARY

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40284883001	**POINT NO.802 SLLT-RW-2551-5701**	Water	09/27/24 09:50	09/28/24 10:10
40284883002	**POINT NO.804 SLLT-RW-2550-5701**	Water	09/27/24 11:25	09/28/24 10:10
40284883003	**SLLT-RWDUP01-5799**	Water	09/27/24 00:00	09/28/24 10:10
40284883004	**POINT NO.999 SLLT-RW-TB01-5701**	Water	09/27/24 08:00	09/28/24 10:10

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SAMPLE ANALYTE COUNT

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40284883001	**POINT NO.802 SLLT-RW-2551-5701**	EPA 6020B	KXS	5	PASI-G
		EPA 8270E by SIM	JRM	2	PAN
		EPA 8260	CXJ	13	PASI-G
		EPA 537.1	MJL	22	PASI-M
40284883002	**POINT NO.804 SLLT-RW-2550-5701**	EPA 6020B	KXS	5	PASI-G
		EPA 8270E by SIM	JRM	2	PAN
		EPA 8260	CXJ	13	PASI-G
		EPA 537.1	MJL	22	PASI-M
40284883003	**SLLT-RWDUP01-5799**	EPA 6020B	KXS	5	PASI-G
		EPA 8270E by SIM	JRM	2	PAN
		EPA 8260	CXJ	13	PASI-G
		EPA 537.1	MJL	22	PASI-M
40284883004	**POINT NO.999 SLLT-RW-TB01-5701**	EPA 8260	CXJ	13	PASI-G

PAN = Pace National - Mt. Juliet
PASI-G = Pace Analytical Services - Green Bay
PASI-M = Pace Analytical Services - Minneapolis

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PROJECT NARRATIVE

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Method: **EPA 6020B**
Description: 6020B MET ICPMS
Client: WSP USA
Date: October 23, 2024

General Information:
3 samples were analyzed for EPA 6020B by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Method: **EPA 8270E by SIM**
Description: SVOA (GC/MS) 8270E-SIM
Client: WSP USA
Date: October 23, 2024

General Information:
3 samples were analyzed for EPA 8270E by SIM by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Method: **EPA 8260**
Description: 8260 MSV
Client: WSP USA
Date: October 23, 2024

General Information:
4 samples were analyzed for EPA 8260 by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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(920)469-2436

PROJECT NARRATIVE

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Method: **EPA 537.1**
Description: 537.1 PFAS Compounds, DW
Client: WSP USA
Date: October 23, 2024

General Information:
3 samples were analyzed for EPA 537.1 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 537.1 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 971668

S0: Surrogate recovery outside laboratory control limits.

- MS (Lab ID: 5079714)
  - 13C3HFPO-DA (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 971668

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40284899030

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 5079714)
  - 11Cl-PF3OUdS
  - HFPO-DA
  - PFBS

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Green Bay, WI 54302
(920)469-2436

PROJECT NARRATIVE

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Method: **EPA 537.1**
Description: 537.1 PFAS Compounds, DW
Client: WSP USA
Date: October 23, 2024

QC Batch: 971668

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40284899030

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- PFDoA
- PFHpA
- PFHxA
- PFTrDA

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Sample: POINT NO.802 SLLT-RW-2551-5701 **Lab ID: 40284883001** Collected: 09/27/24 09:50 Received: 09/28/24 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A								
	Pace Analytical Services - Green Bay								
Arsenic	**<0.28**	ug/L	1.0	0.28	1	10/02/24 07:35	10/03/24 17:27	7440-38-2	
Barium	**9.1**	ug/L	2.3	0.70	1	10/02/24 07:35	10/03/24 17:27	7440-39-3	
Iron	**106J**	ug/L	250	58.0	1	10/02/24 07:35	10/03/24 17:27	7439-89-6	
Lead	**1.0**	ug/L	1.0	0.24	1	10/02/24 07:35	10/03/24 17:27	7439-92-1	
Manganese	**5.0**	ug/L	4.0	1.2	1	10/02/24 07:35	10/03/24 17:27	7439-96-5	
SVOA (GC/MS) 8270E-SIM	Analytical Method: EPA 8270E by SIM Preparation Method: 3510C								
	Pace National - Mt. Juliet								
1,4-Dioxane (p-Dioxane)	**<0.300**	ug/L	1.00	0.300	1	10/02/24 23:59	10/04/24 09:10	123-91-1	
Surrogates									
Nitrobenzene-d5 (S)	67.9	%	10.0-120		1	10/02/24 23:59	10/04/24 09:10	4165-60-0	
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Benzene	**<0.30**	ug/L	1.0	0.30	1		10/02/24 19:22	71-43-2	
Chloroethane	**<1.4**	ug/L	5.0	1.4	1		10/02/24 19:22	75-00-3	
1,4-Dichlorobenzene	**<0.89**	ug/L	1.0	0.89	1		10/02/24 19:22	106-46-7	
1,1-Dichloroethane	**<0.30**	ug/L	1.0	0.30	1		10/02/24 19:22	75-34-3	
1,2-Dichloroethane	**<0.29**	ug/L	1.0	0.29	1		10/02/24 19:22	107-06-2	
cis-1,2-Dichloroethene	**<0.47**	ug/L	1.0	0.47	1		10/02/24 19:22	156-59-2	
Methylene Chloride	**<0.32**	ug/L	5.0	0.32	1		10/02/24 19:22	75-09-2	
Tetrachloroethene	**<0.41**	ug/L	1.0	0.41	1		10/02/24 19:22	127-18-4	
Trichloroethene	**<0.32**	ug/L	1.0	0.32	1		10/02/24 19:22	79-01-6	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/02/24 19:22	75-01-4	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		10/02/24 19:22	2199-69-1	
4-Bromofluorobenzene (S)	94	%	70-130		1		10/02/24 19:22	460-00-4	
Toluene-d8 (S)	94	%	70-130		1		10/02/24 19:22	2037-26-5	
537.1 PFAS Compounds, DW	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1								
	Pace Analytical Services - Minneapolis								
11Cl-PF3OUdS	**<0.65**	ng/L	2.0	0.65	1	10/07/24 14:28	10/08/24 23:49	763051-92-9	
9Cl-PF3ONS	**<0.72**	ng/L	2.0	0.72	1	10/07/24 14:28	10/08/24 23:49	756426-58-1	
ADONA	**<0.72**	ng/L	2.0	0.72	1	10/07/24 14:28	10/08/24 23:49	919005-14-4	
HFPO-DA	**<0.82**	ng/L	2.1	0.82	1	10/07/24 14:28	10/08/24 23:49	13252-13-6	
NEtFOSAA	**<0.57**	ng/L	2.1	0.57	1	10/07/24 14:28	10/08/24 23:49	2991-50-6	
NMeFOSAA	**<0.59**	ng/L	2.1	0.59	1	10/07/24 14:28	10/08/24 23:49	2355-31-9	
PFBS	**<0.67**	ng/L	1.9	0.67	1	10/07/24 14:28	10/08/24 23:49	375-73-5	
PFDA	**<0.89**	ng/L	2.1	0.89	1	10/07/24 14:28	10/08/24 23:49	335-76-2	
PFHxA	**<0.89**	ng/L	2.1	0.89	1	10/07/24 14:28	10/08/24 23:49	307-24-4	
PFDoA	**<0.53**	ng/L	2.1	0.53	1	10/07/24 14:28	10/08/24 23:49	307-55-1	
PFHpA	**<0.81**	ng/L	2.1	0.81	1	10/07/24 14:28	10/08/24 23:49	375-85-9	
PFHxS	**<0.65**	ng/L	1.9	0.65	1	10/07/24 14:28	10/08/24 23:49	355-46-4	
PFNA	**<1.0**	ng/L	2.1	1.0	1	10/07/24 14:28	10/08/24 23:49	375-95-1	

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ANALYTICAL RESULTS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Sample: POINT NO.802 SLLT-RW-2551-5701 **Lab ID: 40284883001** Collected: 09/27/24 09:50 Received: 09/28/24 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, DW	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1								
	Pace Analytical Services - Minneapolis								
PFOS	**<0.67**	ng/L	2.0	0.67	1	10/07/24 14:28	10/08/24 23:49	1763-23-1	
PFOA	**<0.92**	ng/L	2.1	0.92	1	10/07/24 14:28	10/08/24 23:49	335-67-1	
PFTeDA	**<0.65**	ng/L	2.1	0.65	1	10/07/24 14:28	10/08/24 23:49	376-06-7	
PFTrDA	**<0.61**	ng/L	2.1	0.61	1	10/07/24 14:28	10/08/24 23:49	72629-94-8	
PFUnA	**<0.80**	ng/L	2.1	0.80	1	10/07/24 14:28	10/08/24 23:49	2058-94-8	
Surrogates									
13C2-PFDA (S)	120	%.	70-130		1	10/07/24 14:28	10/08/24 23:49		
13C2-PFHxA (S)	98	%.	70-130		1	10/07/24 14:28	10/08/24 23:49		
NEtFOSAA-d5 (S)	109	%.	70-130		1	10/07/24 14:28	10/08/24 23:49		
13C3HFPO-DA (S)	78	%.	70-130		1	10/07/24 14:28	10/08/24 23:49		

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ANALYTICAL RESULTS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Sample: POINT NO.804 SLLT-RW-2550-5701 **Lab ID: 40284883002** Collected: 09/27/24 11:25 Received: 09/28/24 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A								
	Pace Analytical Services - Green Bay								
Arsenic	**<0.28**	ug/L	1.0	0.28	1	10/02/24 07:35	10/03/24 17:32	7440-38-2	
Barium	**20.5**	ug/L	2.3	0.70	1	10/02/24 07:35	10/03/24 17:32	7440-39-3	
Iron	**7080**	ug/L	250	58.0	1	10/02/24 07:35	10/03/24 17:32	7439-89-6	
Lead	**8.5**	ug/L	1.0	0.24	1	10/02/24 07:35	10/03/24 17:32	7439-92-1	
Manganese	**30.5**	ug/L	4.0	1.2	1	10/02/24 07:35	10/03/24 17:32	7439-96-5	
SVOA (GC/MS) 8270E-SIM	Analytical Method: EPA 8270E by SIM Preparation Method: 3510C								
	Pace National - Mt. Juliet								
1,4-Dioxane (p-Dioxane)	**1.06**	ug/L	1.00	0.300	1	10/02/24 23:59	10/04/24 09:29	123-91-1	
Surrogates									
Nitrobenzene-d5 (S)	80.0	%	10.0-120		1	10/02/24 23:59	10/04/24 09:29	4165-60-0	
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Benzene	**<0.30**	ug/L	1.0	0.30	1		10/02/24 19:40	71-43-2	
Chloroethane	**<1.4**	ug/L	5.0	1.4	1		10/02/24 19:40	75-00-3	
1,4-Dichlorobenzene	**<0.89**	ug/L	1.0	0.89	1		10/02/24 19:40	106-46-7	
1,1-Dichloroethane	**<0.30**	ug/L	1.0	0.30	1		10/02/24 19:40	75-34-3	
1,2-Dichloroethane	**<0.29**	ug/L	1.0	0.29	1		10/02/24 19:40	107-06-2	
cis-1,2-Dichloroethene	**<0.47**	ug/L	1.0	0.47	1		10/02/24 19:40	156-59-2	
Methylene Chloride	**<0.32**	ug/L	5.0	0.32	1		10/02/24 19:40	75-09-2	
Tetrachloroethene	**<0.41**	ug/L	1.0	0.41	1		10/02/24 19:40	127-18-4	
Trichloroethene	**<0.32**	ug/L	1.0	0.32	1		10/02/24 19:40	79-01-6	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/02/24 19:40	75-01-4	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	104	%	70-130		1		10/02/24 19:40	2199-69-1	
4-Bromofluorobenzene (S)	92	%	70-130		1		10/02/24 19:40	460-00-4	
Toluene-d8 (S)	97	%	70-130		1		10/02/24 19:40	2037-26-5	
537.1 PFAS Compounds, DW	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1								
	Pace Analytical Services - Minneapolis								
11Cl-PF3OUdS	**<1.2**	ng/L	3.6	1.2	1	10/07/24 14:28	10/08/24 23:56	763051-92-9	
9Cl-PF3ONS	**<1.3**	ng/L	3.6	1.3	1	10/07/24 14:28	10/08/24 23:56	756426-58-1	
ADONA	**<1.3**	ng/L	3.7	1.3	1	10/07/24 14:28	10/08/24 23:56	919005-14-4	
HFPO-DA	**<1.5**	ng/L	3.9	1.5	1	10/07/24 14:28	10/08/24 23:56	13252-13-6	
NEtFOSAA	**<1.0**	ng/L	3.9	1.0	1	10/07/24 14:28	10/08/24 23:56	2991-50-6	
NMeFOSAA	**<1.1**	ng/L	3.9	1.1	1	10/07/24 14:28	10/08/24 23:56	2355-31-9	
PFBS	**2.4J**	ng/L	3.4	1.2	1	10/07/24 14:28	10/08/24 23:56	375-73-5	
PFDA	**<1.6**	ng/L	3.9	1.6	1	10/07/24 14:28	10/08/24 23:56	335-76-2	
PFHxA	**2.2J**	ng/L	3.9	1.6	1	10/07/24 14:28	10/08/24 23:56	307-24-4	
PFDoA	**<0.96**	ng/L	3.9	0.96	1	10/07/24 14:28	10/08/24 23:56	307-55-1	
PFHpA	**<1.5**	ng/L	3.9	1.5	1	10/07/24 14:28	10/08/24 23:56	375-85-9	
PFHxS	**2.1J**	ng/L	3.5	1.2	1	10/07/24 14:28	10/08/24 23:56	355-46-4	
PFNA	**<1.9**	ng/L	3.9	1.9	1	10/07/24 14:28	10/08/24 23:56	375-95-1	

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ANALYTICAL RESULTS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Sample: POINT NO.804 SLLT-RW-2550-5701 **Lab ID: 40284883002** Collected: 09/27/24 11:25 Received: 09/28/24 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, DW	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1								
	Pace Analytical Services - Minneapolis								
PFOS	**<1.2**	ng/L	3.6	1.2	1	10/07/24 14:28	10/08/24 23:56	1763-23-1	
PFOA	**<1.7**	ng/L	3.9	1.7	1	10/07/24 14:28	10/08/24 23:56	335-67-1	
PFTeDA	**<1.2**	ng/L	3.9	1.2	1	10/07/24 14:28	10/08/24 23:56	376-06-7	
PFTrDA	**<1.1**	ng/L	3.9	1.1	1	10/07/24 14:28	10/08/24 23:56	72629-94-8	
PFUnA	**<1.5**	ng/L	3.9	1.5	1	10/07/24 14:28	10/08/24 23:56	2058-94-8	
Surrogates									
13C2-PFDA (S)	120	%.	70-130		1	10/07/24 14:28	10/08/24 23:56		
13C2-PFHxA (S)	97	%.	70-130		1	10/07/24 14:28	10/08/24 23:56		
NEtFOSAA-d5 (S)	92	%.	70-130		1	10/07/24 14:28	10/08/24 23:56		
13C3HFPO-DA (S)	78	%.	70-130		1	10/07/24 14:28	10/08/24 23:56		

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ANALYTICAL RESULTS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Sample: SLLT-RWDUP01-5799 **Lab ID: 40284883003** Collected: 09/27/24 00:00 Received: 09/28/24 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A								
	Pace Analytical Services - Green Bay								
Arsenic	**<0.28**	ug/L	1.0	0.28	1	10/02/24 07:35	10/03/24 17:36	7440-38-2	
Barium	**19.8**	ug/L	2.3	0.70	1	10/02/24 07:35	10/03/24 17:36	7440-39-3	
Iron	**6770**	ug/L	250	58.0	1	10/02/24 07:35	10/03/24 17:36	7439-89-6	
Lead	**6.8**	ug/L	1.0	0.24	1	10/02/24 07:35	10/03/24 17:36	7439-92-1	
Manganese	**30.1**	ug/L	4.0	1.2	1	10/02/24 07:35	10/03/24 17:36	7439-96-5	
SVOA (GC/MS) 8270E-SIM	Analytical Method: EPA 8270E by SIM Preparation Method: 3510C								
	Pace National - Mt. Juliet								
1,4-Dioxane (p-Dioxane)	**1.17**	ug/L	1.00	0.300	1	10/02/24 23:59	10/04/24 09:48	123-91-1	
Surrogates									
Nitrobenzene-d5 (S)	55.6	%	10.0-120		1	10/02/24 23:59	10/04/24 09:48	4165-60-0	
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Benzene	**<0.30**	ug/L	1.0	0.30	1		10/02/24 19:58	71-43-2	
Chloroethane	**<1.4**	ug/L	5.0	1.4	1		10/02/24 19:58	75-00-3	
1,4-Dichlorobenzene	**<0.89**	ug/L	1.0	0.89	1		10/02/24 19:58	106-46-7	
1,1-Dichloroethane	**<0.30**	ug/L	1.0	0.30	1		10/02/24 19:58	75-34-3	
1,2-Dichloroethane	**<0.29**	ug/L	1.0	0.29	1		10/02/24 19:58	107-06-2	
cis-1,2-Dichloroethene	**<0.47**	ug/L	1.0	0.47	1		10/02/24 19:58	156-59-2	
Methylene Chloride	**<0.32**	ug/L	5.0	0.32	1		10/02/24 19:58	75-09-2	
Tetrachloroethene	**<0.41**	ug/L	1.0	0.41	1		10/02/24 19:58	127-18-4	
Trichloroethene	**<0.32**	ug/L	1.0	0.32	1		10/02/24 19:58	79-01-6	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/02/24 19:58	75-01-4	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		10/02/24 19:58	2199-69-1	
4-Bromofluorobenzene (S)	92	%	70-130		1		10/02/24 19:58	460-00-4	
Toluene-d8 (S)	95	%	70-130		1		10/02/24 19:58	2037-26-5	
537.1 PFAS Compounds, DW	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1								
	Pace Analytical Services - Minneapolis								
11Cl-PF3OUdS	**<1.2**	ng/L	3.7	1.2	1	10/07/24 14:28	10/08/24 23:42	763051-92-9	
9Cl-PF3ONS	**<1.3**	ng/L	3.6	1.3	1	10/07/24 14:28	10/08/24 23:42	756426-58-1	
ADONA	**<1.3**	ng/L	3.7	1.3	1	10/07/24 14:28	10/08/24 23:42	919005-14-4	
HFPO-DA	**<1.5**	ng/L	3.9	1.5	1	10/07/24 14:28	10/08/24 23:42	13252-13-6	
NEtFOSAA	**<1.1**	ng/L	3.9	1.1	1	10/07/24 14:28	10/08/24 23:42	2991-50-6	
NMeFOSAA	**<1.1**	ng/L	3.9	1.1	1	10/07/24 14:28	10/08/24 23:42	2355-31-9	
PFBS	**2.6J**	ng/L	3.5	1.2	1	10/07/24 14:28	10/08/24 23:42	375-73-5	
PFDA	**<1.6**	ng/L	3.9	1.6	1	10/07/24 14:28	10/08/24 23:42	335-76-2	
PFHxA	**2.2J**	ng/L	3.9	1.6	1	10/07/24 14:28	10/08/24 23:42	307-24-4	
PFDoA	**<0.97**	ng/L	3.9	0.97	1	10/07/24 14:28	10/08/24 23:42	307-55-1	
PFHpA	**<1.5**	ng/L	3.9	1.5	1	10/07/24 14:28	10/08/24 23:42	375-85-9	
PFHxS	**2.3J**	ng/L	3.6	1.2	1	10/07/24 14:28	10/08/24 23:42	355-46-4	
PFNA	**<1.9**	ng/L	3.9	1.9	1	10/07/24 14:28	10/08/24 23:42	375-95-1	
PFOS	**<1.2**	ng/L	3.6	1.2	1	10/07/24 14:28	10/08/24 23:42	1763-23-1	

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ANALYTICAL RESULTS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Sample: SLLT-RWDUP01-5799 **Lab ID: 40284883003** Collected: 09/27/24 00:00 Received: 09/28/24 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, DW	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1								
	Pace Analytical Services - Minneapolis								
PFOA	**<1.7**	ng/L	3.9	1.7	1	10/07/24 14:28	10/08/24 23:42	335-67-1	
PFTeDA	**<1.2**	ng/L	3.9	1.2	1	10/07/24 14:28	10/08/24 23:42	376-06-7	
PFTrDA	**<1.1**	ng/L	3.9	1.1	1	10/07/24 14:28	10/08/24 23:42	72629-94-8	
PFUnA	**<1.5**	ng/L	3.9	1.5	1	10/07/24 14:28	10/08/24 23:42	2058-94-8	
Surrogates									
13C2-PFDA (S)	121	%.	70-130		1	10/07/24 14:28	10/08/24 23:42		
13C2-PFHxA (S)	99	%.	70-130		1	10/07/24 14:28	10/08/24 23:42		
NEtFOSAA-d5 (S)	84	%.	70-130		1	10/07/24 14:28	10/08/24 23:42		
13C3HFPO-DA (S)	80	%.	70-130		1	10/07/24 14:28	10/08/24 23:42		

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ANALYTICAL RESULTS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Sample: POINT NO.999 SLLT-RW-TB01-5701 **Lab ID: 40284883004** Collected: 09/27/24 08:00 Received: 09/28/24 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Benzene	**<0.30**	ug/L	1.0	0.30	1		10/02/24 18:46	71-43-2	
Chloroethane	**<1.4**	ug/L	5.0	1.4	1		10/02/24 18:46	75-00-3	
1,4-Dichlorobenzene	**<0.89**	ug/L	1.0	0.89	1		10/02/24 18:46	106-46-7	
1,1-Dichloroethane	**<0.30**	ug/L	1.0	0.30	1		10/02/24 18:46	75-34-3	
1,2-Dichloroethane	**<0.29**	ug/L	1.0	0.29	1		10/02/24 18:46	107-06-2	
cis-1,2-Dichloroethene	**<0.47**	ug/L	1.0	0.47	1		10/02/24 18:46	156-59-2	
Methylene Chloride	**<0.32**	ug/L	5.0	0.32	1		10/02/24 18:46	75-09-2	
Tetrachloroethene	**<0.41**	ug/L	1.0	0.41	1		10/02/24 18:46	127-18-4	
Trichloroethene	**<0.32**	ug/L	1.0	0.32	1		10/02/24 18:46	79-01-6	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/02/24 18:46	75-01-4	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		10/02/24 18:46	2199-69-1	
4-Bromofluorobenzene (S)	92	%	70-130		1		10/02/24 18:46	460-00-4	
Toluene-d8 (S)	95	%	70-130		1		10/02/24 18:46	2037-26-5	

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QUALITY CONTROL DATA

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

QC Batch: 485928
QC Batch Method: EPA 3010A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40284883001, 40284883002, 40284883003

METHOD BLANK: 2782795
Matrix: Water
Associated Lab Samples: 40284883001, 40284883002, 40284883003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<0.28	1.0	10/03/24 14:14	
Barium	ug/L	<0.70	2.3	10/03/24 14:14	
Iron	ug/L	<58.0	250	10/03/24 14:14	
Lead	ug/L	<0.24	1.0	10/03/24 14:14	
Manganese	ug/L	<1.2	4.0	10/03/24 14:14	

LABORATORY CONTROL SAMPLE: 2782796

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	250	250	100	80-120	
Barium	ug/L	250	248	99	80-120	
Iron	ug/L	10000	9330	93	80-120	
Lead	ug/L	250	243	97	80-120	
Manganese	ug/L	250	250	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2782797 2782798

Parameter	Units	40284825004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	<1.0	250	250	268	269	107	108	75-125	0	20	
Barium	ug/L	232	250	250	491	492	104	104	75-125	0	20	
Iron	ug/L	353	10000	10000	9750	9810	94	95	75-125	1	20	
Lead	ug/L	<1.0	250	250	263	264	105	105	75-125	0	20	
Manganese	ug/L	365	250	250	638	639	109	110	75-125	0	20	

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QUALITY CONTROL DATA

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

QC Batch: 2374145
QC Batch Method: 3510C
Analysis Method: EPA 8270E by SIM
Analysis Description: SVOA (GC/MS) 8270E-SIM
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 40284883001, 40284883002, 40284883003

METHOD BLANK: R4130189-3 Matrix: Water
Associated Lab Samples: 40284883001, 40284883002, 40284883003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	<0.300	1.00	10/04/24 03:26	
Nitrobenzene-d5 (S)	%	76.9	10.0-120	10/04/24 03:26	

LABORATORY CONTROL SAMPLE & LCSD: R4130189-1 R4130189-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	50.0	52.7	52.0	105	104	73.0-146	1.34	20	
Nitrobenzene-d5 (S)	%				72.8	66.4	10.0-120			

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QUALITY CONTROL DATA

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

QC Batch: 485762
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40284883001, 40284883002, 40284883003, 40284883004

METHOD BLANK: 2782163 Matrix: Water
Associated Lab Samples: 40284883001, 40284883002, 40284883003, 40284883004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethane	ug/L	<0.30	1.0	10/02/24 14:53	
1,2-Dichloroethane	ug/L	<0.29	1.0	10/02/24 14:53	
1,4-Dichlorobenzene	ug/L	<0.89	1.0	10/02/24 14:53	
Benzene	ug/L	<0.30	1.0	10/02/24 14:53	
Chloroethane	ug/L	<1.4	5.0	10/02/24 14:53	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	10/02/24 14:53	
Methylene Chloride	ug/L	<0.32	5.0	10/02/24 14:53	
Tetrachloroethene	ug/L	<0.41	1.0	10/02/24 14:53	
Trichloroethene	ug/L	<0.32	1.0	10/02/24 14:53	
Vinyl chloride	ug/L	<0.17	1.0	10/02/24 14:53	
1,2-Dichlorobenzene-d4 (S)	%	101	70-130	10/02/24 14:53	
4-Bromofluorobenzene (S)	%	92	70-130	10/02/24 14:53	
Toluene-d8 (S)	%	96	70-130	10/02/24 14:53	

LABORATORY CONTROL SAMPLE: 2782164

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethane	ug/L	50	55.0	110	70-130	
1,2-Dichloroethane	ug/L	50	53.3	107	70-130	
1,4-Dichlorobenzene	ug/L	50	54.1	108	70-130	
Benzene	ug/L	50	54.6	109	70-130	
Chloroethane	ug/L	50	48.2	96	59-141	
cis-1,2-Dichloroethene	ug/L	50	51.1	102	70-130	
Methylene Chloride	ug/L	50	53.5	107	70-137	
Tetrachloroethene	ug/L	50	58.4	117	70-130	
Trichloroethene	ug/L	50	64.8	130	70-130	
Vinyl chloride	ug/L	50	51.0	102	51-145	
1,2-Dichlorobenzene-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			93	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2783511 2783512

Parameter	Units	40284848002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	<0.30	50	50	54.5	52.8	109	106	70-131	3	20	
1,2-Dichloroethane	ug/L	<0.29	50	50	53.1	55.2	106	110	70-130	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2783511 2783512

Parameter	Units	40284848002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dichlorobenzene	ug/L	<0.89	50	50	54.4	55.5	109	111	70-130	2	20	
Benzene	ug/L	<0.30	50	50	53.3	54.0	107	108	70-130	1	20	
Chloroethane	ug/L	<1.4	50	50	44.3	47.4	89	95	56-143	7	20	
cis-1,2-Dichloroethene	ug/L	<0.47	50	50	51.4	52.2	103	104	70-130	2	20	
Methylene Chloride	ug/L	<0.32	50	50	52.4	52.8	105	106	70-137	1	20	
Tetrachloroethene	ug/L	1.9	50	50	59.7	60.6	116	117	70-131	1	20	
Trichloroethene	ug/L	<0.32	50	50	55.4	55.2	111	110	70-130	0	20	
Vinyl chloride	ug/L	<0.17	50	50	45.1	44.3	90	89	45-147	2	20	
1,2-Dichlorobenzene-d4 (S)	%						96	98	70-130			
4-Bromofluorobenzene (S)	%						93	94	70-130			
Toluene-d8 (S)	%						97	96	70-130			

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QUALITY CONTROL DATA

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

QC Batch: 971668
QC Batch Method: EPA 537.1
Analysis Method: EPA 537.1
Analysis Description: 537.1 PFOA Compounds, DW
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 40284883001, 40284883002, 40284883003

METHOD BLANK: 5077335
Matrix: Drinking Water
Associated Lab Samples: 40284883001, 40284883002, 40284883003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11Cl-PF3OUdS	ng/L	<0.60	1.9	10/08/24 23:13	
9Cl-PF3ONS	ng/L	<0.66	1.8	10/08/24 23:13	
ADONA	ng/L	<0.67	1.9	10/08/24 23:13	
HFPO-DA	ng/L	<0.76	2.0	10/08/24 23:13	
NEtFOSAA	ng/L	<0.53	2.0	10/08/24 23:13	
NMeFOSAA	ng/L	<0.54	2.0	10/08/24 23:13	
PFBS	ng/L	<0.62	1.7	10/08/24 23:13	
PFDA	ng/L	<0.82	2.0	10/08/24 23:13	
PFDoA	ng/L	<0.49	2.0	10/08/24 23:13	
PFHpA	ng/L	<0.75	2.0	10/08/24 23:13	
PFHxA	ng/L	<0.83	2.0	10/08/24 23:13	
PFHxS	ng/L	<0.60	1.8	10/08/24 23:13	
PFNA	ng/L	<0.95	2.0	10/08/24 23:13	
PFOA	ng/L	<0.85	2.0	10/08/24 23:13	
PFOS	ng/L	<0.62	1.8	10/08/24 23:13	
PFTeDA	ng/L	<0.60	2.0	10/08/24 23:13	
PFTrDA	ng/L	<0.57	2.0	10/08/24 23:13	
PFUnA	ng/L	<0.74	2.0	10/08/24 23:13	
13C2-PFDA (S)	%.	128	70-130	10/08/24 23:13	
13C2-PFHxA (S)	%.	102	70-130	10/08/24 23:13	
13C3HFPO-DA (S)	%.	84	70-130	10/08/24 23:13	
NEtFOSAA-d5 (S)	%.	104	70-130	10/08/24 23:13	

LABORATORY CONTROL SAMPLE & LCSD: 5077337 5077338

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
11Cl-PF3OUdS	ng/L	18.3	16.3	16.6	89	89	70-130	2	30	
9Cl-PF3ONS	ng/L	18.2	16.6	16.9	91	91	70-130	1	30	
ADONA	ng/L	18.3	16.2	15.9	89	85	70-130	2	30	
HFPO-DA	ng/L	19.4	13.8	13.9	71	70	70-130	0	30	
NEtFOSAA	ng/L	19.4	20.1	20.4	103	103	70-130	1	30	
NMeFOSAA	ng/L	19.4	20.4	20.6	105	104	70-130	1	30	
PFBS	ng/L	17.2	14.6	14.2	85	81	70-130	3	30	
PFDA	ng/L	19.4	22.3	22.2	115	112	70-130	1	30	
PFDoA	ng/L	19.4	20.5	21.1	105	107	70-130	3	30	
PFHpA	ng/L	19.4	16.9	16.7	87	84	70-130	1	30	
PFHxA	ng/L	19.4	18.4	18.0	95	91	70-130	2	30	
PFHxS	ng/L	17.7	15.4	14.7	87	82	70-130	4	30	
PFNA	ng/L	19.4	19.3	19.6	99	99	70-130	1	30	

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QUALITY CONTROL DATA

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

LABORATORY CONTROL SAMPLE & LCSD: 5077337 5077338

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PFOA	ng/L	19.4	17.1	17.1	88	87	70-130	0	30	
PFOS	ng/L	18	17.2	17.4	96	95	70-130	1	30	
PFTeDA	ng/L	19.4	19.6	20.5	101	104	70-130	4	30	
PFTrDA	ng/L	19.4	19.4	20.5	100	104	70-130	5	30	
PFUnA	ng/L	19.4	20.8	20.0	107	101	70-130	4	30	
13C2-PFDA (S)	%.				130	124	70-130			
13C2-PFHxA (S)	%.				102	96	70-130			
13C3HFPO-DA (S)	%.				84	78	70-130			
NEtFOSAA-d5 (S)	%.				104	103	70-130			

LABORATORY CONTROL SAMPLE: 5077336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ng/L	1.8	1.7J	92	50-150	
9Cl-PF3ONS	ng/L	1.8	1.6J	88	50-150	
ADONA	ng/L	1.8	1.6J	89	50-150	
HFPO-DA	ng/L	1.9	1.4J	73	50-150	
NEtFOSAA	ng/L	1.9	2.1	108	50-150	
NMeFOSAA	ng/L	1.9	2.1	110	50-150	
PFBS	ng/L	1.7	1.3J	78	50-150	
PFDA	ng/L	1.9	2.4	123	50-150	
PFDoA	ng/L	1.9	2.1	110	50-150	
PFHpA	ng/L	1.9	1.7J	87	50-150	
PFHxA	ng/L	1.9	1.8J	94	50-150	
PFHxS	ng/L	1.8	1.5J	84	50-150	
PFNA	ng/L	1.9	1.9	100	50-150	
PFOA	ng/L	1.9	1.7J	89	50-150	
PFOS	ng/L	1.8	1.7J	93	50-150	
PFTeDA	ng/L	1.9	2.0	104	50-150	
PFTrDA	ng/L	1.9	2.0	104	50-150	
PFUnA	ng/L	1.9	2.1	108	50-150	
13C2-PFDA (S)	%.			129	70-130	
13C2-PFHxA (S)	%.			97	70-130	
13C3HFPO-DA (S)	%.			81	70-130	
NEtFOSAA-d5 (S)	%.			106	70-130	

MATRIX SPIKE SAMPLE: 5079714

Parameter	Units	40284899030 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ng/L	<0.63	1.9	1.0J	54	70-130	M1
9Cl-PF3ONS	ng/L	<0.69	1.9	1.6J	86	70-130	
ADONA	ng/L	<0.69	1.9	1.5J	78	70-130	
HFPO-DA	ng/L	<0.79	2	1.3J	56	70-130	M1
NEtFOSAA	ng/L	<0.55	2	1.7J	83	70-130	

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QUALITY CONTROL DATA

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

MATRIX SPIKE SAMPLE: 5079714

Parameter	Units	40284899030 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
NMeFOSAA	ng/L	<0.56	2	1.9J	95	70-130	
PFBS	ng/L	0.67J	1.8	1.8J	61	70-130	M1
PFDA	ng/L	<0.85	2	2.2	103	70-130	
PFDoA	ng/L	<0.51	2	1.2J	58	70-130	M1
PFHpA	ng/L	3.7	2	5.0	65	70-130	M1
PFHxA	ng/L	9.0	2	8.4	-31	70-130	M1
PFHxS	ng/L	3.5	1.8	5.5	108	70-130	
PFNA	ng/L	<0.98	2	2.1	102	70-130	
PFOA	ng/L	8.6	2	10.5	94	70-130	
PFOS	ng/L	<0.65	1.9	1.9	90	70-130	
PFTeDA	ng/L	<0.63	2	1.8J	89	70-130	
PFTrDA	ng/L	<0.59	2	0.94J	47	70-130	M1
PFUnA	ng/L	<0.77	2	1.5J	72	70-130	
13C2-PFDA (S)	%.				122	70-130	
13C2-PFHxA (S)	%.				84	70-130	
13C3HFPO-DA (S)	%.				51	70-130	S0
NEtFOSAA-d5 (S)	%.				99	70-130	

SAMPLE DUPLICATE: 5079715

Parameter	Units	40284899002 Result	Dup Result	RPD	Max RPD	Qualifiers
11Cl-PF3OUdS	ng/L	<0.63	<0.62		30	
9Cl-PF3ONS	ng/L	<0.69	<0.68		30	
ADONA	ng/L	<0.70	<0.68		30	
HFPO-DA	ng/L	<0.80	<0.78		30	
NEtFOSAA	ng/L	<0.56	<0.54		30	
NMeFOSAA	ng/L	<0.57	<0.55		30	
PFBS	ng/L	1.7J	1.7J		30	
PFDA	ng/L	<0.86	<0.84		30	
PFDoA	ng/L	<0.51	<0.50		30	
PFHpA	ng/L	<0.79	<0.77		30	
PFHxA	ng/L	<0.87	<0.84		30	
PFHxS	ng/L	2.9	3.0	5	30	
PFNA	ng/L	<0.99	<0.96		30	
PFOA	ng/L	2.7	3.0	13	30	
PFOS	ng/L	48.3	50.1	4	30	
PFTeDA	ng/L	<0.63	<0.61		30	
PFTrDA	ng/L	<0.60	<0.58		30	
PFUnA	ng/L	<0.77	<0.75		30	
13C2-PFDA (S)	%.	125	129			
13C2-PFHxA (S)	%.	87	97			
13C3HFPO-DA (S)	%.	70	74			
NEtFOSAA-d5 (S)	%.	103	105			

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QUALIFIERS

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - The reported result is an estimated value.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Analyte was not detected and is reported as less than the LOD or as defined by the customer.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 31403999.012 SPICKLER LF 4077
Pace Project No.: 40284883

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40284883001	**POINT NO.802 SLLT-RW-2551-5701**	EPA 3010A	485928	EPA 6020B	486089
40284883002	**POINT NO.804 SLLT-RW-2550-5701**	EPA 3010A	485928	EPA 6020B	486089
40284883003	**SLLT-RWDUP01-5799**	EPA 3010A	485928	EPA 6020B	486089
40284883001	**POINT NO.802 SLLT-RW-2551-5701**	3510C	2374145	EPA 8270E by SIM	2374145
40284883002	**POINT NO.804 SLLT-RW-2550-5701**	3510C	2374145	EPA 8270E by SIM	2374145
40284883003	**SLLT-RWDUP01-5799**	3510C	2374145	EPA 8270E by SIM	2374145
40284883001	**POINT NO.802 SLLT-RW-2551-5701**	EPA 8260	485762		
40284883002	**POINT NO.804 SLLT-RW-2550-5701**	EPA 8260	485762		
40284883003	**SLLT-RWDUP01-5799**	EPA 8260	485762		
40284883004	**POINT NO.999 SLLT-RW-TB01-5701**	EPA 8260	485762		
40284883001	**POINT NO.802 SLLT-RW-2551-5701**	EPA 537.1	971668	EPA 537.1	972648
40284883002	**POINT NO.804 SLLT-RW-2550-5701**	EPA 537.1	971668	EPA 537.1	972648
40284883003	**SLLT-RWDUP01-5799**	EPA 537.1	971668	EPA 537.1	972648

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40284883

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company: WSP USA
Address: 1880 West Oak Parkway, Bld. 100, Suite 106
Marietta, GA 30062
Email To: alison.levinson@wsp.com
Phone: 770-973-2100 Fax: 770-973-7395
Requested Due Date/TAT: STANDARD TAT

Section B Required Project Information:

Report To: Alison Levinson
Copy To: Kathy Gunderson
Marie Weber-Goeke
Purchase Order No.: 309034.14
Project Name: Spickler LF License No. 4077 ID No. 737154550
Project Number: 31403999.012

Section C Invoice Information:

Attention: Alison Levinson
Company Name: WSP USA
Address: 1880 W Oak Pkwy Bld100 Ste106 MariettaGA 30
Pace Quote Reference: 090210
Pace Project Manager: Steve Mleczko
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ____

Site Location STATE: Wisconsin

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test ↓ Y/N ↓	VOCs(8260-Site-Specific) N	As, Ba, Fe, Mn, Pb (Total) N	Vinyl Chloride SIM 8260 N	PFAS (Method 537.1) N		1,4-dioxane (8270-SIM) N	As, Ba, Fe, Mn, Pb (diss) Y						Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~Point No. 800~~	SLLT-RW-2543-5701	WT	G																~~X~~	~~X~~	~~X~~	~~X~~		~~X~~								
2	Point No. 802	SLLT-RW-2551-5701	WT	G			9/27/24	0950		11	4		1	6						X	X	X	X		X								001
3	Point No. 804	SLLT-RW-2550-5701	WT	G			9/27/24	1125		12	4		2	6						X	X	X	X		X	X								002
4		SLLT-RWDUP01-5799	WT	G			9/27/24	—		12	4		2	6						X	X	X	X		X	X								003
5	Point No. 999	SLLT-RW-TB01-5701	WT				9/27/24	0000		4				4						X		X											004
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Site-Specific VOCs:1,2-Dichloroethane, PCE, TCE, Methylene Chloride, Vinyl Chloride, Benzene, cis-1,2-dichloroethene, 1,1-dichloroethane, 1,4-Dichlorobenzene, and Chloroethane.	FedEx	9/28/24	1010	[illegible]	9/28/24	1010	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jordan Felt, Brenel Greist

SIGNATURE of SAMPLER: [illegible] DATE Signed (MM/DD/YY): 09/27/24

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007

Sample Preservation Receipt Form

Client Name: WSP

Project # 40284883

All containers needing preservation have been checked and noted below: ☑Yes ☐No ☐N/A

Lab Lot# of pH paper: 10033733 Lab Std #ID of preservation (if pH adjusted):

Initial when completed: GF Date/Time:

Pace Lab #	Glass: AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	Plastic: BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	Vials: VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	JG9U	WGFU	WPFU	General: SP5T	ZPLC	GN 1	GN 2	VOA Vials (>6mm)*	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001									2		1						6															X		2.5 / 5
002									2		2						6															X		2.5 / 5
003									2		2						6															X		2.5 / 5
004																	4																	2.5 / 5
005																																		2.5 / 5
006																																		2.5 / 5
007																																		2.5 / 5
008																																		2.5 / 5
009																																		2.5 / 5
010																																		2.5 / 5
011					9/28/24 GF																													2.5 / 5
012																																		2.5 / 5
013																																		2.5 / 5
014																																		2.5 / 5
015																																		2.5 / 5
016																																		2.5 / 5
017																																		2.5 / 5
018																																		2.5 / 5
019																																		2.5 / 5
020																																		2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : ☐Yes ☑No ☐N/A *If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

DC#_Title: ENV-FRM-GBAY-0014 v03_SCUR
Effective Date: 8/17/2022

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO#: 40284883

40284883

Client Name: WSP

Courier: ☐ CS Logistics ☑ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other:

Tracking #: 7241 0294 8901

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used SR-141 **Type of Ice:** (Wet) Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 0.5 /Corr: 0.5

Temp Blank Present: ☑ yes ☐ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:
Date: 9/28/24 /Initials: GF

Labeled By Initials: GA

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☐Yes ☑No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No	5.
- DI VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume: For Analysis: ☑Yes ☐No	MS/MSD: ☐Yes ☑No ☐N/A	8.
Correct Containers Used: Correct Type: Pace Green Bay, Pace IR, Non-Pace	☑Yes ☐No	9.
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☑Yes ☐No ☐N/A	12.
Trip Blank Present:	☑Yes ☐No ☐N/A	13.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 527		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Page 2 of 2

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	WSP USA
Address:	1880 West Oak Parkway, Bld, 100, Suite 106
	Marietta, GA 30062
Email To:	alison.levinson@wsp.com
Phone: 770-973-2100	Fax: 770-973-7395
Requested Due Date/TAT:	STANDARD TAT

Section B Required Project Information:

Report To:	Alison Levinson
Copy To:	Kathy Gunderson
	Marie Weber-Goeke
Purchase Order No.:	309034.14
Project Name:	Spickler LF License No. 4077 ID No. 737154550
Project Number:	31403999.012

Section C Invoice Information:

Attention:	Alison Levinson
Company Name:	WSP USA
Address:	1880 W Oak Pkwy Bld100 Ste106 MarietteGA 30
Pace Quote Reference:	090210
Pace Project Manager:	Steve Mleczko
Pace Profile #:	

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER ____

Site Location STATE: Wisconsin

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	VOCs(8260-Site-Specific) N	As, Ba, Fe, Mn, Pb (Total) N	Vinyl Chloride SIM 8260 N	PFAS (Method 537.1) N	1,4-dioxane (8270-SIM) N	As, Ba, Fe, Mn, Pb (diss) Y	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 47831146
1	~~Point No. 800~~ ~~SLLT-RW-2543-5701~~	WT	G																X	X	X	X	X			
2	Point No. 802 SLLT-RW-2551-5701	WT	G			9/27/24	0950		11	4		1	6						X	X	X	X	X			-01
3	Point No. 804 SLLT-RW-2550-5701	WT	G			9/27/24	1125		12	4		2	6						X	X	X	X	X	X		-02
4	SLLT-RWDUP01-5799	WT	G			9/27/24	—		12	4		2	6						X	X	X	X	X	X		-03
5	Point No. 999 SLLT-RW-TB01-5701	WT				9/27/24	0800		2				2						X		X					
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Site-Specific VOCs:1,2-Dichloroethane, PCE, TCE, Methylene Chloride, Vinyl Chloride, Benzene, cis-1,2-dichloroethene, 1,1-dichloroethane, 1,4-Dichlorobenzene, and Chloroethane.				CRoberts	09-28-24	0900	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jordan Felt, Rachel Geist

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 09/27/24

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Sample Receipt Checklist

COC Seal Present/Intact: X Y N
COC Signed/Accurate: X Y N
Bottles arrive intact: X Y N
Correct bottles used: X Y N
Sufficient volume sent: X Y N
RA Screen <0.5 mR/hr: X Y N

If Applicable
VOA Zero Headspace: Y N
Pres. Correct/Check: Y N

L783146

Tracking Numbers		Temperature
7241 0294 9203		1.7+0.3=2.0 TLA9
7241 0294 9214		2.2+0.3=2.5 TLA9

Name

Date

CT LABORATORIES

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ANALYTICAL REPORT

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

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www.ctlaboratories.com

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608 -356-2760 • www.ctlaboratories.com

ANALYTICAL REPORT

PACE ANALYTICAL
STEVEN MLECZKO
1241 BELLEVUE ST
SUITE 9
GREEN BAY, WI 54302

Project Name: SPICKLER LF
Project Phase:
Project #: 31403999.012
Folder #: 189820
Purchase Order #: PACE WO # 40284883
Contract #: 2288

Arrival Temperature: 3.1
Report Date: 10/16/2024
Date Received: 10/1/2024
Reprint Date: 10/16/2024

CT LAB#: 1508488 Sample Description: SLLT-RW-2551-5701 40284883001 License/Well #: 04077/802 Sampled: 9/27/2024 09:50

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results										
Vinyl chloride	<0.019	ug/L	0.019	0.10	1			10/9/2024 04:56	RLD	EPA 8260C
1,2 Dichloroethane-d4	105	% Recovery	70.0	130	1			10/9/2024 04:56	RLD	EPA 8260C
Bromofluorobenzene	106	% Recovery	70.0	130	1			10/9/2024 04:56	RLD	EPA 8260C
d8-Toluene	101	% Recovery	70.0	130	1			10/9/2024 04:56	RLD	EPA 8260C
Dibromofluoromethane	105	% Recovery	70.0	130	1			10/9/2024 04:56	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 1508489 Sample Description: SLLT-RW-2550-5701 40284883002 License/Well #: 04077/804 Sampled: 9/27/2024 11:25

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results										
Vinyl chloride	<0.019	ug/L	0.019	0.10	1			10/9/2024 05:24	RLD	EPA 8260C
1,2 Dichloroethane-d4	99.0	% Recovery	70.0	130	1			10/9/2024 05:24	RLD	EPA 8260C
Bromofluorobenzene	101	% Recovery	70.0	130	1			10/9/2024 05:24	RLD	EPA 8260C
d8-Toluene	100	% Recovery	70.0	130	1			10/9/2024 05:24	RLD	EPA 8260C
Dibromofluoromethane	103	% Recovery	70.0	130	1			10/9/2024 05:24	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 1508490 Sample Description: SLLT-RWDUP01-5799 40284883003 License #:04077 Sampled: 9/27/2024 00:00

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results										
Vinyl chloride	<0.019	ug/L	0.019	0.10	1			10/9/2024 05:53	RLD	EPA 8260C
1,2 Dichloroethane-d4	98.0	% Recovery	70.0	130	1			10/9/2024 05:53	RLD	EPA 8260C
Bromofluorobenzene	103	% Recovery	70.0	130	1			10/9/2024 05:53	RLD	EPA 8260C
d8-Toluene	99.0	% Recovery	70.0	130	1			10/9/2024 05:53	RLD	EPA 8260C
Dibromofluoromethane	102	% Recovery	70.0	130	1			10/9/2024 05:53	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 1508491 Sample Description: SLLT-RW-TB01-5701 40284883004 License/Well #: 04077/999 Sampled: 9/27/2024 08:00

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results										
Vinyl chloride	<0.019	ug/L	0.019	0.10	1			10/8/2024 22:21	RLD	EPA 8260C
1,2 Dichloroethane-d4	107	% Recovery	70.0	130	1			10/8/2024 22:21	RLD	EPA 8260C
Bromofluorobenzene	100	% Recovery	70.0	130	1			10/8/2024 22:21	RLD	EPA 8260C
d8-Toluene	100	% Recovery	70.0	130	1			10/8/2024 22:21	RLD	EPA 8260C
Dibromofluoromethane	104	% Recovery	70.0	130	1			10/8/2024 22:21	RLD	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

Notes: * Indicates Value in between the LOD (limit of detection) and the LOQ (limit of quantitation). All LOD/LOQs are adjusted to reflect dilution, percent solids, and any differences in the sample weight / volume as compared to standard amounts.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached. This report has been specifically prepared to satisfy project or program requirements.

Submitted by: Brett M. Szymanski
Project Manager
608-356-2760

QC Qualifiers

Code	Description
B	Analyte detected in the associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
I	Incubator temperature was outside acceptance limits during test period.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was below detection limit.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Specified calibration criteria was not met.

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
Wisconsin (DATCP) Bacteriology ID# 289
Louisiana NELAP (primary) ID# 115843
Illinois NELAP Lab ID# 200073
Kansas NELAP Lab ID# E-10368
Virginia NELAP Lab ID# 460203
ISO/IEC 17025-2005 A2LA Cert # 3806.01
DoD-ELAP A2LA 3806.01

QC Summary Report

PACE ANALYTICAL **Project Name: SPICKLER LF**

SDG #: 0 **Folder #: 189820** **Project #: 31403999.012**

Lab Control Spike Water

Analytical Run #:	285930	Analysis Date:	10/8/2024	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1511783	Analysis Time:	20:28	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	RLD	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
1,2 Dichloroethane-d4	99.0	% Recovery			100	99.0	87	---	107		
Bromofluorobenzene	102	% Recovery			100	102	90	---	108		
d8-Toluene	101	% Recovery			100	101	93	---	108		
Dibromofluoromethane	100	% Recovery			100	100	93	---	106		
Vinyl chloride	4.17	ug/L			4.0	104	73	---	127		20

Method Blank Water

Analytical Run #:	285930	Analysis Date:	10/8/2024	Prep Batch #:		Matrix:	LIQUID
CTLab #:	1514306	Analysis Time:	21:24	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	RLD	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,2 Dichloroethane-d4	92.0	% Recovery			100	92.0	68 --- 120		
Bromofluorobenzene	102	% Recovery			100	102	68 --- 120		
d8-Toluene	99.0	% Recovery			100	99.0	71 --- 117		
Dibromofluoromethane	101	% Recovery			100	101	67 --- 122		
Vinyl chloride	0.019	ug/L		U	0		0.019		

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	189820	Print Date / Time:	10/01/2024	10:28	
Client:	PACE ANALYTICAL	Received Date / Time / By:	10/01/2024	10:22	erc
Project Name:	SPICKLER LF	Log-In Date / Time / By:	10/01/2024	10:28	erc
Project Phase:		Project #:	31403999.012	PM:	BMS
Coolers:	UNMARKED	Temperature:	3.1 C	On Ice:	**Y**
Custody Seals Present :	**Y**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**Y**	Numbers:	DATED AND SIGNED		
Ship Method:	FEDEX EXPRESS	Tracking Number:	778927202120		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

ONE (1) CUSTODY SEAL WAS PRESENT AND INTACT ON THE COOLER UPON RECEIPT (DATED 9/30/24 AND SIGNED).

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1508488	SLLT-RW-2551-5701				
		VOA HCL	1	/	VOC
		VOA HCL	1	/	VOC
		VOA HCL	1	/	VOC
		Total # of Containers of Type	(***VOA HCL***) =	**3**	

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1508489	SLLT-RW-2550-5701				
		VOA HCL	1	/	VOC
		VOA HCL	1	/	VOC
		VOA HCL	1	/	VOC
		Total # of Containers of Type	(***VOA HCL***) =	**3**	

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1508490	SLLT-RWDUP01-5799				
		VOA HCL	1	/	VOC
		VOA HCL	1	/	VOC
		VOA HCL	1	/	VOC
		Total # of Containers of Type	(***VOA HCL***) =	**3**	

Sample ID /	Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1508491	SLLT-RW-TB01-5701				
		TRIP BLANK	1	N / N	VOC
		TRIP BLANK	1	N / N	VOC
		Total # of Containers of Type	(***TRIP BLANK***) =	**2**	

Condition Code	*Condition Description*
1	Sample Received OK

Chain of Custody

PASI Green Bay Laboratory

Workorder: 40284883 **Workorder Name:** 31403999.012 SPICKLER LF 4077 **Results Requested By:** 10/15/2024

Report / Invoice To

Steven Mleczko
Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436
Email: steve.mleczko@pacelabs.com

Send Invoice To: invoices@pacelabs.coupahost.com
State of Sample Origin: WI LOD/LOQ

Subcontract To

P.O._____

CT Laboratories LLC
1230 Lange Court
Baraboo, WI 53913

Requested Analysis

Folder #: 189820
Company: PACE ANALYTICAL
Project: 31403999.012 SPICLKER LF 4077
Logged By: erc PM: BMS

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HCL	8260 Low Level Vinyl Chloride	LAB USE ONLY
1	POINT NO.802 SLLT-RW-2551-5701	9/26/2024 09:50	40284883001	Water	3	X	1508958
2	POINT NO.804 SLLT-RW-2550-5701	9/26/2024 11:25	40284883002	Water	3	X	89
3	SLLT-RWDUP01-5799	9/26/2024 00:00	40284883003	Water	3	X	90
4	POINT NO.999 SLLT-RW-TB01-5701	9/26/2024 08:00	40284883004	Water	2	X	91
5							

Transfers	Released By	Date/Time	Received By	Date/Time
1	E. Jal PACE	9/30/24 1600	[illegible]	10/2/24 1012
2			[illegible]	10/2/24 1031
3				

Comments

WI GEMS EDD and EQUIS EDD needed (see 185813)
Level 4 QC package also needed

Cooler Temperature on Receipt 3.1 °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

Chain of Custody

PASI Green Bay Laboratory

Revised COC

Workorder: 40284883 **Workorder Name:** 31403999.012 SPICKLER LF 4077 **Results Requested By:** 10/15/2024

Report / Invoice To

Steven Mleczko
Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436
Email: steve.mleczko@pacelabs.com

Send Invoice To: **invoices@pacelabs.coupahost.com**
State of Sample Origin: WI LOD/LOQ

Subcontract To

P.O._____

CT Laboratories LLC
1230 Lange Court
Baraboo, WI 53913

Requested Analysis

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HCL						8260 Low Level Vinyl Chloride												LAB USE ONLY
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2	POINT NO.804 SLLT-RW-2550-5701	9/27/2024 11:25	40284883002	Water	3						X												
3	SLLT-RWDUP01-5799	9/27/2024 00:00	40284883003	Water	3						X												
4	POINT NO.999 SLLT-RW-TB01-5701	9/27/2024 08:00	40284883004	Water	2						X												
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1				
2				
3				

Comments

WI GEMS EDD and EQUIS EDD needed (see 185813)
Level 4 QC package also needed

Cooler Temperature on Receipt _____°C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

ORIGIN ID:GRBA (920) 469-2436
MAIYER HER

1241 BELLEVUE ST
SUITE 9
GREEN BAY, WI 54302
UNITED STATES US

SHIP DATE: 30SEP24
ACTWGT: 15.00 LB
CAD: 4406253/INET4535

BILL SENDER

TO **LAB**
CT LABORATORIES LLC
1230 LANGE COURT

BARABOO WI 53913
(920) 469-2436 REF:
INV:
PO: DEPT:

58CJ2/B264/C8C4

FedEx Express

J24102407139 1/ev

TUE - 01 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7789 2720 2120**

XP LNRA

53913
WI-US MSN

CUSTODY SEAL
DATE 9/30/24
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • www.qecusa.com

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Ice Present Yes No n/a
Temperature 3.1
Initials Eric
Date 10/1/24 Time 10:00
Cooler # XXX

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