



April 25, 2024

Project No. 31405076.2023

**Mr. Aaron Darling**

Michigan Department of Environment, Great Lakes, and Energy  
Office of Waste Management and Radiological Protection  
Southeast Michigan District  
27700 Donald Court  
Warren, MI 48092-2793

**SMITHS CREEK LANDFILL  
FIRST QUARTER 2024 ENVIRONMENTAL MONITORING REPORT  
SMITHS CREEK, MICHIGAN**

Dear Mr. Darling,

WSP USA Inc. is providing this report to summarize monitoring efforts from the above referenced sampling event. This report is submitted on behalf of the St. Clair County, Michigan under the direction of Mr. Matt Williams. The Smiths Creek Landfill (SCL) is a Type II landfill located at 6779 Smiths Creek Road in Kimball Township, St. Clair County, Michigan.

## **1.0 INTRODUCTION**

In accordance with the Hydrogeologic Monitoring Plan [HMP] (Golder, August 2014), groundwater is sampled on a semi-annual basis during the second and fourth quarters of each calendar year, while surface water and leachate are sampled on a quarterly basis. During the first quarter 2024 monitoring period, surface water and leachate sampling was performed on February 6, 2024. Samples were collected in accordance with the Michigan Department of Environmental Quality (MDEQ) [now Michigan Department of Environment, Great Lakes, and Energy (EGLE)] approved HMP. Designated sampling parameters, test methods, reporting limits, and corresponding containers, preservatives, and holding times are summarized in the HMP and applicable Public Act 451, Part 115 Rules.

## **2.0 MONITORING RESULTS**

The laboratory report for the surface water and leachate is included in Appendix A. A review of the report indicates that the surface water and leachate results are similar to historical results.

## **3.0 CHAIN OF CUSTODY INFORMATION & FIELD FORMS**

Following sample collection, the samples were submitted to Pace Analytical Laboratories under standard chain-of-custody protocol. Copies of the chains-of-custody for this event are included with the laboratory results in Appendix A.

## 4.0 CONCLUSION

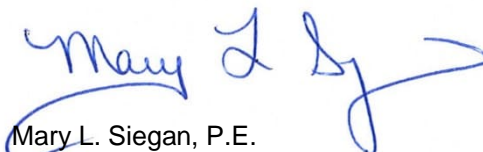
This report is submitted as required by the site's approved HMP by the undersigned certified professionals. Please do not hesitate to contact either of us at (248) 536-5435 if you have any questions.

Sincerely,

**WSP USA Inc.**



Rachel Rubach  
*Consultant, Environmental Engineer*



Mary L. Siegan, P.E.  
*Assistant Vice President, Environmental Engineer*

CJL/MLS

CC: Matt Williams, Smiths Creek Landfill

Attachments: Appendix A – Laboratory Analytical Data and Field Data Sheets

[https://wspnlinenam.sharepoint.com/sites/global-smithscreekthomasrd/shared documents/200 reports/scl/1q24/fn rp-scl 1q2024.docx](https://wspnlinenam.sharepoint.com/sites/global-smithscreekthomasrd/shared%20documents/200%20reports/scl/1q24/fn%20rp-scl%201q2024.docx)

**APPENDIX A**

# Laboratory Analytical Data and Field Data Sheets



February 21, 2024

Mary Siegan  
WSP  
46850 Magellan Drive  
Suite 190  
Novi, MI 48377

RE: Project: Smith's Creek LF Leachate 1Q24  
Pace Project No.: 50365294

Dear Mary Siegan:

Enclosed are the analytical results for sample(s) received by the laboratory on February 07, 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.

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

- Pace Analytical Services - Indianapolis

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

Sincerely,

A handwritten signature in blue ink that reads "Brian Hall".

Brian Hall  
brian.hall@pacelabs.com  
(616)975-4500  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## CERTIFICATIONS

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Washington Dept of Ecology #: C1081

Wisconsin Laboratory #: 999788130

USDA Foreign Soil Permit #: 525-23-13-23119

USDA Compliance Agreement #: IN-SL-22-001

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### SAMPLE SUMMARY

Project: Smith's Creek LF Leachate 1Q24  
Pace Project No.: 50365294

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50365294001	Leachate	Water	02/06/24 12:15	02/07/24 09:15
50365294002	Trip Blank	Water	02/06/24 08:00	02/07/24 09:15

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### SAMPLE ANALYTE COUNT

Project: Smith's Creek LF Leachate 1Q24  
Pace Project No.: 50365294

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50365294001	Leachate	EPA 6010	JPK	1	PASI-I
		EPA 5030B/8260	DAP	39	PASI-I
		SM 2540C	SL	1	PASI-I
		EPA 9038	STS	1	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-CI-E	ZM	1	PASI-I
		SM 4500-NH3 G	OAS	1	PASI-I
		50365294002	Trip Blank	EPA 5030B/8260	DAP

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### ANALYTICAL RESULTS

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

Sample: Leachate	Lab ID: 50365294001	Collected: 02/06/24 12:15	Received: 02/07/24 09:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Iron	12300	ug/L	100	1	02/13/24 07:58	02/13/24 22:54	7439-89-6	
<b>8260 MSV Low Level</b>								
Analytical Method: EPA 5030B/8260								
Pace Analytical Services - Indianapolis								
Benzene	5.6	ug/L	5.0	5		02/09/24 16:34	71-43-2	
Bromodichloromethane	<5.0	ug/L	5.0	5		02/09/24 16:34	75-27-4	
Bromoform	<5.0	ug/L	5.0	5		02/09/24 16:34	75-25-2	
Bromomethane	<25.0	ug/L	25.0	5		02/09/24 16:34	74-83-9	
Carbon tetrachloride	<5.0	ug/L	5.0	5		02/09/24 16:34	56-23-5	
Chlorobenzene	<5.0	ug/L	5.0	5		02/09/24 16:34	108-90-7	
Chloroethane	<25.0	ug/L	25.0	5		02/09/24 16:34	75-00-3	
Chloroform	<5.0	ug/L	5.0	5		02/09/24 16:34	67-66-3	
Chloromethane	<25.0	ug/L	25.0	5		02/09/24 16:34	74-87-3	
Dibromochloromethane	<5.0	ug/L	5.0	5		02/09/24 16:34	124-48-1	
Dibromomethane	<5.0	ug/L	5.0	5		02/09/24 16:34	74-95-3	
1,2-Dichlorobenzene	<5.0	ug/L	5.0	5		02/09/24 16:34	95-50-1	
1,4-Dichlorobenzene	<5.0	ug/L	5.0	5		02/09/24 16:34	106-46-7	
1,1-Dichloroethane	<5.0	ug/L	5.0	5		02/09/24 16:34	75-34-3	
1,2-Dichloroethane	<5.0	ug/L	5.0	5		02/09/24 16:34	107-06-2	
1,1-Dichloroethene	<5.0	ug/L	5.0	5		02/09/24 16:34	75-35-4	
cis-1,2-Dichloroethene	7.0	ug/L	5.0	5		02/09/24 16:34	156-59-2	
trans-1,2-Dichloroethene	<5.0	ug/L	5.0	5		02/09/24 16:34	156-60-5	
1,2-Dichloropropane	<5.0	ug/L	5.0	5		02/09/24 16:34	78-87-5	
cis-1,3-Dichloropropene	<5.0	ug/L	5.0	5		02/09/24 16:34	10061-01-5	
trans-1,3-Dichloropropene	<5.0	ug/L	5.0	5		02/09/24 16:34	10061-02-6	
Ethylbenzene	16.4	ug/L	5.0	5		02/09/24 16:34	100-41-4	
Iodomethane	<5.0	ug/L	5.0	5		02/09/24 16:34	74-88-4	
Methylene Chloride	<25.0	ug/L	25.0	5		02/09/24 16:34	75-09-2	
Styrene	<5.0	ug/L	5.0	5		02/09/24 16:34	100-42-5	
1,1,1,2-Tetrachloroethane	<5.0	ug/L	5.0	5		02/09/24 16:34	630-20-6	
1,1,1,2,2-Tetrachloroethane	<5.0	ug/L	5.0	5		02/09/24 16:34	79-34-5	
Tetrachloroethene	<5.0	ug/L	5.0	5		02/09/24 16:34	127-18-4	
Toluene	15.1	ug/L	5.0	5		02/09/24 16:34	108-88-3	
1,1,1-Trichloroethane	<5.0	ug/L	5.0	5		02/09/24 16:34	71-55-6	
1,1,2-Trichloroethane	<5.0	ug/L	5.0	5		02/09/24 16:34	79-00-5	
Trichloroethene	<5.0	ug/L	5.0	5		02/09/24 16:34	79-01-6	
Trichlorofluoromethane	<5.0	ug/L	5.0	5		02/09/24 16:34	75-69-4	
1,2,3-Trichloropropane	<5.0	ug/L	5.0	5		02/09/24 16:34	96-18-4	
Vinyl chloride	<5.0	ug/L	5.0	5		02/09/24 16:34	75-01-4	
Xylene (Total)	34.7	ug/L	10.0	5		02/09/24 16:34	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	99	%	79-124	5		02/09/24 16:34	460-00-4	F1,HS, pH
Dibromofluoromethane (S)	103	%	82-128	5		02/09/24 16:34	1868-53-7	
Toluene-d8 (S)	97	%	73-122	5		02/09/24 16:34	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.





### ANALYTICAL RESULTS

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

<b>Sample: Leachate</b>		<b>Lab ID: 50365294001</b>	Collected: 02/06/24 12:15	Received: 02/07/24 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Indianapolis						
Total Dissolved Solids	<b>5400000</b>	ug/L	667000	1		02/12/24 09:14		1d
<b>9038 Sulfate Water</b>		Analytical Method: EPA 9038 Pace Analytical Services - Indianapolis						
Sulfate	<b>69800</b>	ug/L	50000	5		02/13/24 10:24	14808-79-8	
<b>Total Inorganic Nitrogen</b>		Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis						
Total Inorganic Nitrogen	<b>813000</b>	ug/L	20.0	1		02/21/24 16:12		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis						
Nitrogen, NO2 plus NO3	<b>&lt;2000</b>	ug/L	2000	100		02/17/24 14:35		D3,P4
<b>4500 Chloride</b>		Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis						
Chloride	<b>5480000</b>	ug/L	200000	200		02/14/24 16:29	16887-00-6	
<b>4500 Ammonia Water</b>		Analytical Method: SM 4500-NH3 G Pace Analytical Services - Indianapolis						
Nitrogen, Ammonia	<b>813000</b>	ug/L	20000	200		02/10/24 14:13	7664-41-7	P4

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## ANALYTICAL RESULTS

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

Sample: Trip Blank	Lab ID: 50365294002	Collected: 02/06/24 08:00	Received: 02/07/24 09:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>	Analytical Method: EPA 5030B/8260							
	Pace Analytical Services - Indianapolis							
Benzene	<1.0	ug/L	1.0	1		02/09/24 16:06	71-43-2	
Bromodichloromethane	<1.0	ug/L	1.0	1		02/09/24 16:06	75-27-4	
Bromoform	<1.0	ug/L	1.0	1		02/09/24 16:06	75-25-2	
Bromomethane	<5.0	ug/L	5.0	1		02/09/24 16:06	74-83-9	
Carbon tetrachloride	<1.0	ug/L	1.0	1		02/09/24 16:06	56-23-5	
Chlorobenzene	<1.0	ug/L	1.0	1		02/09/24 16:06	108-90-7	
Chloroethane	<5.0	ug/L	5.0	1		02/09/24 16:06	75-00-3	
Chloroform	<1.0	ug/L	1.0	1		02/09/24 16:06	67-66-3	
Chloromethane	<5.0	ug/L	5.0	1		02/09/24 16:06	74-87-3	
Dibromochloromethane	<1.0	ug/L	1.0	1		02/09/24 16:06	124-48-1	
Dibromomethane	<1.0	ug/L	1.0	1		02/09/24 16:06	74-95-3	
1,2-Dichlorobenzene	<1.0	ug/L	1.0	1		02/09/24 16:06	95-50-1	
1,4-Dichlorobenzene	<1.0	ug/L	1.0	1		02/09/24 16:06	106-46-7	
1,1-Dichloroethane	<1.0	ug/L	1.0	1		02/09/24 16:06	75-34-3	
1,2-Dichloroethane	<1.0	ug/L	1.0	1		02/09/24 16:06	107-06-2	
1,1-Dichloroethene	<1.0	ug/L	1.0	1		02/09/24 16:06	75-35-4	
cis-1,2-Dichloroethene	<1.0	ug/L	1.0	1		02/09/24 16:06	156-59-2	
trans-1,2-Dichloroethene	<1.0	ug/L	1.0	1		02/09/24 16:06	156-60-5	
1,2-Dichloropropane	<1.0	ug/L	1.0	1		02/09/24 16:06	78-87-5	
cis-1,3-Dichloropropene	<1.0	ug/L	1.0	1		02/09/24 16:06	10061-01-5	
trans-1,3-Dichloropropene	<1.0	ug/L	1.0	1		02/09/24 16:06	10061-02-6	
Ethylbenzene	<1.0	ug/L	1.0	1		02/09/24 16:06	100-41-4	
Iodomethane	<1.0	ug/L	1.0	1		02/09/24 16:06	74-88-4	
Methylene Chloride	<5.0	ug/L	5.0	1		02/09/24 16:06	75-09-2	
Styrene	<1.0	ug/L	1.0	1		02/09/24 16:06	100-42-5	
1,1,1,2-Tetrachloroethane	<1.0	ug/L	1.0	1		02/09/24 16:06	630-20-6	
1,1,2,2-Tetrachloroethane	<1.0	ug/L	1.0	1		02/09/24 16:06	79-34-5	
Tetrachloroethene	<1.0	ug/L	1.0	1		02/09/24 16:06	127-18-4	
Toluene	<1.0	ug/L	1.0	1		02/09/24 16:06	108-88-3	
1,1,1-Trichloroethane	<1.0	ug/L	1.0	1		02/09/24 16:06	71-55-6	
1,1,2-Trichloroethane	<1.0	ug/L	1.0	1		02/09/24 16:06	79-00-5	
Trichloroethene	<1.0	ug/L	1.0	1		02/09/24 16:06	79-01-6	
Trichlorofluoromethane	<1.0	ug/L	1.0	1		02/09/24 16:06	75-69-4	
1,2,3-Trichloropropane	<1.0	ug/L	1.0	1		02/09/24 16:06	96-18-4	
Vinyl chloride	<1.0	ug/L	1.0	1		02/09/24 16:06	75-01-4	
Xylene (Total)	<2.0	ug/L	2.0	1		02/09/24 16:06	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100	%	79-124	1		02/09/24 16:06	460-00-4	
Dibromofluoromethane (S)	103	%	82-128	1		02/09/24 16:06	1868-53-7	
Toluene-d8 (S)	99	%	73-122	1		02/09/24 16:06	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

QC Batch:	774872	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365294001

METHOD BLANK: 3547349 Matrix: Water  
 Associated Lab Samples: 50365294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron	ug/L	<100	100	02/13/24 22:00	

LABORATORY CONTROL SAMPLE: 3547350

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9680	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547351 3547352

Parameter	Units	50365254001		3547352		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Iron	ug/L	21.4 mg/L	10000	30900	30200	95	89	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

QC Batch: 774901

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Low Level

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365294001, 50365294002

METHOD BLANK: 3547506

Matrix: Water

Associated Lab Samples: 50365294001, 50365294002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	02/09/24 12:50	
1,1,1-Trichloroethane	ug/L	<1.0	1.0	02/09/24 12:50	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	1.0	02/09/24 12:50	
1,1,2-Trichloroethane	ug/L	<1.0	1.0	02/09/24 12:50	
1,1-Dichloroethane	ug/L	<1.0	1.0	02/09/24 12:50	
1,1-Dichloroethene	ug/L	<1.0	1.0	02/09/24 12:50	
1,2,3-Trichloropropane	ug/L	<1.0	1.0	02/09/24 12:50	
1,2-Dichlorobenzene	ug/L	<1.0	1.0	02/09/24 12:50	
1,2-Dichloroethane	ug/L	<1.0	1.0	02/09/24 12:50	
1,2-Dichloropropane	ug/L	<1.0	1.0	02/09/24 12:50	
1,4-Dichlorobenzene	ug/L	<1.0	1.0	02/09/24 12:50	
Benzene	ug/L	<1.0	1.0	02/09/24 12:50	
Bromodichloromethane	ug/L	<1.0	1.0	02/09/24 12:50	
Bromoform	ug/L	<1.0	1.0	02/09/24 12:50	
Bromomethane	ug/L	<5.0	5.0	02/09/24 12:50	
Carbon tetrachloride	ug/L	<1.0	1.0	02/09/24 12:50	
Chlorobenzene	ug/L	<1.0	1.0	02/09/24 12:50	
Chloroethane	ug/L	<5.0	5.0	02/09/24 12:50	
Chloroform	ug/L	<1.0	1.0	02/09/24 12:50	
Chloromethane	ug/L	<5.0	5.0	02/09/24 12:50	
cis-1,2-Dichloroethene	ug/L	<1.0	1.0	02/09/24 12:50	
cis-1,3-Dichloropropene	ug/L	<1.0	1.0	02/09/24 12:50	
Dibromochloromethane	ug/L	<1.0	1.0	02/09/24 12:50	
Dibromomethane	ug/L	<1.0	1.0	02/09/24 12:50	
Ethylbenzene	ug/L	<1.0	1.0	02/09/24 12:50	
Iodomethane	ug/L	<1.0	1.0	02/09/24 12:50	
Methylene Chloride	ug/L	<5.0	5.0	02/09/24 12:50	
Styrene	ug/L	<1.0	1.0	02/09/24 12:50	
Tetrachloroethene	ug/L	<1.0	1.0	02/09/24 12:50	
Toluene	ug/L	<1.0	1.0	02/09/24 12:50	
trans-1,2-Dichloroethene	ug/L	<1.0	1.0	02/09/24 12:50	
trans-1,3-Dichloropropene	ug/L	<1.0	1.0	02/09/24 12:50	
Trichloroethene	ug/L	<1.0	1.0	02/09/24 12:50	
Trichlorofluoromethane	ug/L	<1.0	1.0	02/09/24 12:50	
Vinyl chloride	ug/L	<1.0	1.0	02/09/24 12:50	
Xylene (Total)	ug/L	<2.0	2.0	02/09/24 12:50	
4-Bromofluorobenzene (S)	%	101	79-124	02/09/24 12:50	
Dibromofluoromethane (S)	%	102	82-128	02/09/24 12:50	
Toluene-d8 (S)	%	98	73-122	02/09/24 12:50	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

LABORATORY CONTROL SAMPLE: 3547507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	52.5	105	81-130	
1,1,1-Trichloroethane	ug/L	50	52.2	104	76-127	
1,1,2,2-Tetrachloroethane	ug/L	50	47.4	95	70-126	
1,1,2-Trichloroethane	ug/L	50	50.1	100	79-124	
1,1-Dichloroethane	ug/L	50	51.4	103	76-123	
1,1-Dichloroethene	ug/L	50	51.1	102	73-133	
1,2,3-Trichloropropane	ug/L	50	50.1	100	75-121	
1,2-Dichlorobenzene	ug/L	50	49.3	99	79-123	
1,2-Dichloroethane	ug/L	50	49.7	99	70-124	
1,2-Dichloropropane	ug/L	50	51.0	102	74-128	
1,4-Dichlorobenzene	ug/L	50	49.2	98	77-120	
Benzene	ug/L	50	50.0	100	74-124	
Bromodichloromethane	ug/L	50	52.1	104	80-126	
Bromoform	ug/L	50	51.9	104	75-128	
Bromomethane	ug/L	50	46.0	92	10-183	
Carbon tetrachloride	ug/L	50	52.4	105	78-132	
Chlorobenzene	ug/L	50	49.8	100	77-121	
Chloroethane	ug/L	50	49.3	99	43-140	
Chloroform	ug/L	50	50.3	101	75-118	
Chloromethane	ug/L	50	51.6	103	45-130	
cis-1,2-Dichloroethene	ug/L	50	51.9	104	76-125	
cis-1,3-Dichloropropene	ug/L	50	53.7	107	76-132	
Dibromochloromethane	ug/L	50	51.7	103	79-130	
Dibromomethane	ug/L	50	54.2	108	79-124	
Ethylbenzene	ug/L	50	51.2	102	74-125	
Iodomethane	ug/L	50	48.6	97	10-160	
Methylene Chloride	ug/L	50	49.7	99	77-126	
Styrene	ug/L	50	51.4	103	81-129	
Tetrachloroethene	ug/L	50	52.2	104	73-132	
Toluene	ug/L	50	48.8	98	72-119	
trans-1,2-Dichloroethene	ug/L	50	53.7	107	74-125	
trans-1,3-Dichloropropene	ug/L	50	54.2	108	75-132	
Trichloroethene	ug/L	50	52.0	104	75-127	
Trichlorofluoromethane	ug/L	50	57.9	116	64-136	
Vinyl chloride	ug/L	50	55.3	111	48-133	
Xylene (Total)	ug/L	150	148	99	73-123	
4-Bromofluorobenzene (S)	%			99	79-124	
Dibromofluoromethane (S)	%			100	82-128	
Toluene-d8 (S)	%			99	73-122	

MATRIX SPIKE SAMPLE: 3547509

Parameter	Units	50365305002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	50	43.7	87	60-150	
1,1,1-Trichloroethane	ug/L	ND	50	45.7	91	63-138	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

MATRIX SPIKE SAMPLE: 3547509		50365305002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	50	39.5	79	58-146	
1,1,2-Trichloroethane	ug/L	ND	50	43.6	87	63-142	
1,1-Dichloroethane	ug/L	ND	50	45.6	91	64-138	
1,1-Dichloroethene	ug/L	ND	50	47.0	94	65-139	
1,2,3-Trichloropropane	ug/L	ND	50	40.7	81	54-144	
1,2-Dichlorobenzene	ug/L	ND	50	38.9	78	50-136	
1,2-Dichloroethane	ug/L	ND	50	43.9	88	55-146	
1,2-Dichloropropane	ug/L	ND	50	43.7	87	66-134	
1,4-Dichlorobenzene	ug/L	ND	50	38.9	78	50-131	
Benzene	ug/L	ND	50	44.3	89	65-137	
Bromodichloromethane	ug/L	ND	50	44.7	89	61-149	
Bromoform	ug/L	ND	50	41.7	83	51-138	
Bromomethane	ug/L	ND	50	38.4	77	10-169	
Carbon tetrachloride	ug/L	ND	50	45.8	92	65-156	
Chlorobenzene	ug/L	ND	50	42.0	84	54-135	
Chloroethane	ug/L	ND	50	43.9	88	46-142	
Chloroform	ug/L	ND	50	44.7	89	64-133	
Chloromethane	ug/L	ND	50	47.4	95	30-139	
cis-1,2-Dichloroethene	ug/L	ND	50	46.1	92	59-141	
cis-1,3-Dichloropropene	ug/L	ND	50	43.9	88	57-141	
Dibromochloromethane	ug/L	ND	50	43.5	87	59-147	
Dibromomethane	ug/L	ND	50	47.2	94	64-142	
Ethylbenzene	ug/L	ND	50	42.6	85	50-143	
Iodomethane	ug/L	ND	50	40.4	81	10-154	
Methylene Chloride	ug/L	ND	50	44.9	90	53-126	
Styrene	ug/L	ND	50	29.1	58	57-141	
Tetrachloroethene	ug/L	ND	50	42.6	85	43-149	
Toluene	ug/L	ND	50	42.5	85	57-137	
trans-1,2-Dichloroethene	ug/L	ND	50	46.2	92	63-133	
trans-1,3-Dichloropropene	ug/L	ND	50	42.9	86	56-140	
Trichloroethene	ug/L	ND	50	44.4	89	52-145	
Trichlorofluoromethane	ug/L	ND	50	53.1	106	52-144	
Vinyl chloride	ug/L	ND	50	53.0	106	43-139	
Xylene (Total)	ug/L	ND	150	125	83	52-137	
4-Bromofluorobenzene (S)	%				100	79-124	
Dibromofluoromethane (S)	%				102	82-128	
Toluene-d8 (S)	%				99	73-122	

SAMPLE DUPLICATE: 3547508

Parameter	Units	50365305001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	<1.0		20	
1,1,1-Trichloroethane	ug/L	ND	<1.0		20	
1,1,2,2-Tetrachloroethane	ug/L	ND	<1.0		20	
1,1,2-Trichloroethane	ug/L	ND	<1.0		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

SAMPLE DUPLICATE: 3547508

Parameter	Units	50365305001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethane	ug/L	ND	<1.0		20	
1,1-Dichloroethene	ug/L	ND	<1.0		20	
1,2,3-Trichloropropane	ug/L	ND	<1.0		20	
1,2-Dichlorobenzene	ug/L	ND	<1.0		20	
1,2-Dichloroethane	ug/L	ND	<1.0		20	
1,2-Dichloropropane	ug/L	ND	<1.0		20	
1,4-Dichlorobenzene	ug/L	ND	<1.0		20	
Benzene	ug/L	ND	<1.0		20	
Bromodichloromethane	ug/L	ND	<1.0		20	
Bromoform	ug/L	ND	<1.0		20	
Bromomethane	ug/L	ND	<5.0		20	
Carbon tetrachloride	ug/L	ND	<1.0		20	
Chlorobenzene	ug/L	ND	<1.0		20	
Chloroethane	ug/L	ND	<5.0		20	
Chloroform	ug/L	ND	<1.0		20	
Chloromethane	ug/L	ND	<5.0		20	
cis-1,2-Dichloroethene	ug/L	ND	<1.0		20	
cis-1,3-Dichloropropene	ug/L	ND	<1.0		20	
Dibromochloromethane	ug/L	ND	<1.0		20	
Dibromomethane	ug/L	ND	<1.0		20	
Ethylbenzene	ug/L	ND	<1.0		20	
Iodomethane	ug/L	ND	<1.0		20	
Methylene Chloride	ug/L	ND	<5.0		20	
Styrene	ug/L	ND	<1.0		20	
Tetrachloroethene	ug/L	ND	<1.0		20	
Toluene	ug/L	ND	<1.0		20	
trans-1,2-Dichloroethene	ug/L	ND	<1.0		20	
trans-1,3-Dichloropropene	ug/L	ND	<1.0		20	
Trichloroethene	ug/L	ND	<1.0		20	
Trichlorofluoromethane	ug/L	ND	<1.0		20	
Vinyl chloride	ug/L	ND	<1.0		20	
Xylene (Total)	ug/L	ND	<2.0		20	
4-Bromofluorobenzene (S)	%	100	99			
Dibromofluoromethane (S)	%	104	103			
Toluene-d8 (S)	%	98	98			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

QC Batch: 775029

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365294001

METHOD BLANK: 3548332

Matrix: Water

Associated Lab Samples: 50365294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	ug/L	<20000	20000	02/12/24 09:12	1d

LABORATORY CONTROL SAMPLE: 3548333

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	ug/L	300000	276000	92	80-120	1d

SAMPLE DUPLICATE: 3548334

Parameter	Units	50365208003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	152000	161000	1	10	1d

SAMPLE DUPLICATE: 3548335

Parameter	Units	50365255001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	1140 mg/L	1130000	0	10	1d

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.





**QUALITY CONTROL DATA**

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

QC Batch: 775246

Analysis Method: EPA 9038

QC Batch Method: EPA 9038

Analysis Description: 9038 Sulfate Water

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365294001

METHOD BLANK: 3549098

Matrix: Water

Associated Lab Samples: 50365294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	ug/L	<10000	10000	02/13/24 10:21	

LABORATORY CONTROL SAMPLE: 3549099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	20000	20000	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3549100 3549101

Parameter	Units	50365303001		3549101		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfate	ug/L	327 mg/L	1000000	1000000	1230000	1220000	90	89	90-110	1	20 M3

MATRIX SPIKE SAMPLE: 3549102

Parameter	Units	50365412003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	418 mg/L	1000000	802000	38	90-110	M3

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

QC Batch: 776037

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrate + Nitrite, preserved

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365294001

METHOD BLANK: 3552757

Matrix: Water

Associated Lab Samples: 50365294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	<20.0	20.0	02/17/24 14:21	

LABORATORY CONTROL SAMPLE: 3552758

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	2000	1820	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3552759 3552760

Parameter	Units	50365208002		3552759		3552760		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Nitrogen, NO2 plus NO3	ug/L	426	2000	2490	2460	103	102	90-110	1	20	

MATRIX SPIKE SAMPLE: 3552761

Parameter	Units	60446731002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	3.2 mg/L	4000	7450	107	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

QC Batch:	775558	Analysis Method:	SM 4500-Cl-E
QC Batch Method:	SM 4500-Cl-E	Analysis Description:	4500 Chloride
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365294001

METHOD BLANK: 3550249 Matrix: Water  
 Associated Lab Samples: 50365294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	<1000	1000	02/14/24 16:10	

LABORATORY CONTROL SAMPLE: 3550250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	20000	20600	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3550251 3550252

Parameter	Units	50365254001		3550252		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	ug/L	10.3 mg/L	20000	20000	32600	33600	111	116	90-110	3	20 M3

MATRIX SPIKE SAMPLE: 3550254

Parameter	Units	50365116007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	6890	20000	29100	111	90-110	M0

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

QC Batch: 774980

Analysis Method: SM 4500-NH3 G

QC Batch Method: SM 4500-NH3 G

Analysis Description: 4500 Ammonia

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365294001

METHOD BLANK: 3548119

Matrix: Water

Associated Lab Samples: 50365294001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	ug/L	<100	100	02/10/24 14:00	

LABORATORY CONTROL SAMPLE: 3548120

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	5000	5100	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548121 3548122

Parameter	Units	50365255001		3548121		3548122		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Nitrogen, Ammonia	ug/L	ND	5000	5000	5070	5050	101	101	90-110	0	20

MATRIX SPIKE SAMPLE: 3548123

Parameter	Units	50365146001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	0.035J mg/L	5000	5130	102	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



## QUALIFIERS

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

---

### 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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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 - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

- 1d Oven temperature exceeded the acceptable range for this method. Results may be biased low.
- D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- F1 The sample was analyzed at a dilution due to foaming of the sample in the purge vessel.
- HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M3 Matrix spike recovery was outside laboratory control limits due to matrix interferences.
- P4 Sample field preservation does not meet EPA or method recommendations for this analysis.
- pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Smith's Creek LF Leachate 1Q24

Pace Project No.: 50365294

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50365294001	Leachate	EPA 3010	774872	EPA 6010	775424
50365294001	Leachate	EPA 5030B/8260	774901		
50365294002	Trip Blank	EPA 5030B/8260	774901		
50365294001	Leachate	SM 2540C	775029		
50365294001	Leachate	EPA 9038	775246		
50365294001	Leachate	NO2+NO3+NH3 Calculation	776719		
50365294001	Leachate	EPA 353.2	776037		
50365294001	Leachate	SM 4500-CI-E	775558		
50365294001	Leachate	SM 4500-NH3 G	774980		

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY - Affix Workorder/Login Label Here



50365294

Scan QR Code for instructions

Company Name: WSP - Novi, MI  
Street Address: 46850 Magellan Drive, Novi, MI 48377

Contact/Report To: Mary Siegan  
Phone #: (248)536-5435  
E-Mail: mary.siegan@wsp.com  
Cc E-Mail:

Customer Project #:   
Project Name: Smith's Creek LF Leachate Q134  
Site Collection Info/Facility ID (as applicable):

Invoice To: Mary Siegan  
Invoice E-Mail: mary.siegan@wsp.com  
Purchase Order # (if applicable):  
Quote #:

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT  ET  
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV  
[ ] EQUIS  
[ ] Other

County / State origin of sample(s): Michigan  
Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No  
**Rush (Pre-approval required):**  
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other  
Date Results Requested: **5/18**  
Field Filtered (if applicable): [ ] Yes  No  
Analysis:

Specify Container Size \*\*  
3 3 3 3 6 6  
Identify Container Preservative Type\*\*\*  
1 3 1 2 4 4

\*\*Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other  
\*\*\* Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Analysis Requested

2540C Total Dissolved Solids	353.2 N+N: 4500 NH3: TIN	4500 Chloride; 9038 Sulfate	6010 MET ICP - Fe	8260 MSV VOC LL	Trip Blank-8260 MSV VOC LL
1	1	1	1	3	3

Proj. Mgr:  
**Brian Hall**  
AcctNum / Client ID:  
Table #:  
Profile / Template:  
**8219**  
Prelog / Bottle Ord. ID:  
**EZ 3056991**

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start		Collected or Composite End		# Cont.	Res. Chlorine	
			Date	Time	Date	Time		Results	Units
Leachate	LL	Grab	2/6/24	1215	2/6/24	1215			
Trip Blank	OT	-	2/6/24	-	2/6/24	-			

Preservation non-conformance identified for sample.

Additional Instructions from Pace\*:

Collected By: **lyn Cisco**  
(Printed Name)  
Signature: *[Signature]*

Customer Remarks / Special Conditions / Possible Hazards:  
# Coolers: 1 Thermometer ID: A Correction Factor (°C): 0 Obs. Temp. (°C): 3.8 Corrected Temp. (°C): - On Ice: 7

Relinquished by/Company: (Signature)  
*[Signature]*  
Date/Time: 2/6/24 1500  
Relinquished by/Company: (Signature)  
**FedEx**  
Date/Time: 2/7/24 915  
Relinquished by/Company: (Signature)  
Date/Time:  
Relinquished by/Company: (Signature)  
Date/Time:

Received by/Company: (Signature)  
**FedEx**  
Date/Time: 2/7/24 915  
Received by/Company: (Signature)  
**Jef Webb / PACE**  
Date/Time:  
Received by/Company: (Signature)  
Date/Time:

Received by/Company: (Signature)  
Date/Time:  
Received by/Company: (Signature)  
Date/Time:  
Received by/Company: (Signature)  
Date/Time:

Tracking Number:  
Delivered by: [ ]  
 Ff

Page:



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: TW 2/8/24 830

1. Courier:  FED EX  UPS  CLIENT  PACE  NOW/JETT  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 7 8 (A) B C D E F G H

4. Cooler Temperature(s): 3.8/3.8     
 (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No  
 Cooler temp should be above freezing to 6°C

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circled: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?	<input checked="" type="checkbox"/>		
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:		<input checked="" type="checkbox"/>	

COMMENTS:

---



---



---



---



---



### Sample Container Count

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	WGKU BG1U	MeOH (only)		VOA VIAL HS >6mm	VG9U	DG9U	VG9T	AMBER GLASS						PLASTIC							OTHER			Matrix	HNO3 <2	H2SO4 <2	NaOH >10	Sodium Hydroxide/ ZnAc								
			SBS	DI					DG9H	VG9H	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S						BP3B	BP3Z	CG3H	CG3F	Syringe Kit	Nitric	Sulfuric	Sodium Hydroxide
			Red	Yellow					Green	Black																											
1					3										2	1		1																			
2					3																																
3																																					
4																																					
5																																					
6																																					
7																																					
8																																					
9																																					
10																																					
11																																					
12																																					

Container Codes

Glass	
DG9H	40mL HCl amber voa vial
DG9P	40mL TSP amber vial
DG9S	40mL H2SO4 amber vial
DG9T	40mL Na Thio amber vial
DG9U	40mL unpreserved amber vial
VG9H	40mL HCl clear vial
VG9T	40mL Na Thio. clear vial
VG9U	40mL unpreserved clear vial
I	40mL w/hexane wipe vial
WGKU	8oz unpreserved clear jar
WGFU	4oz clear soil jar
JGFU	4oz unpreserved amber wide
CG3H	250mL clear glass HCl
CG3F	250mL clear glass HCl, Field Filter
BG1H	1L HCl clear glass
BG1S	1L H2SO4 clear glass
BG1T	glass
BG1U	1L unpreserved glass
CG3U	250mL Unpres Clear Glass
AG0U	100mL unpres amber glass
AG1H	1L HCl amber glass
AG1S	1L H2SO4 amber glass
AG1T	1L Na Thiosulfate amber glass
AG1U	1liter unpres amber glass
AG2N	500mL HNO3 amber glass
AG2S	500mL H2SO4 amber glass
AG2U	500mL unpres amber glass
AG3S	250mL H2SO4 amber glass
AG3SF	250mL H2SO4 amb glass -field filtered
AG3U	250mL unpres amber glass
AG3B	250mL NaOH amber glass

Plastic	
BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic
BP3R	250mL Unpres. FF SO4/OH buffer
BP4L	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous	
	LL Cr+6 sampling kit
	ZPLC Ziploc Bag
	R Terracore Kit
	SP5T 120mL Coliform Sodium Thiosulfate
	GN General Container
	U Summa Can (air sample)
	WT Water
	SL Solid
	OL Oil
	NAL Non-aqueous liquid
	WP Wipe

# Pace Container Order #3056991

brian.hall@pacelabs.com

## Addresses

### Order By :

Company WSP - Novi, MI  
 Contact Mary Siegan  
 Email mary.siegan@wsp.com  
 Address 46850 Magellan Drive  
 Address 2 Suite 190  
 City Novi  
 State MI Zip 48377  
 Phone (248)536-5435

### Ship To :

Company WSP - Novi, MI  
 Contact Mary Siegan  
 Email mary.siegan@wsp.com  
 Address 46850 Magellan Drive  
 Address 2 Suite 190  
 City Novi  
 State MI Zip 48377  
 Phone (248)536-5435

### Return To:

Company Pace Analytical Grand Rapids  
 Contact Brian Hall  
 Email brian.hall@pacelabs.com  
 Address 4171 40th Street SE  
 Address 2 \_\_\_\_\_  
 City Grand Rapids  
 State MI Zip 49512  
 Phone (616)975-4500

## Info

**Project Name** Smith's Creek LF Leachate Q134 **Due Date** 01/29/2024 **Profile** 8219 **Quote** \_\_\_\_\_  
**Project Manager** Hall, Brian **Return Date** \_\_\_\_\_ **Carrier** Pace Courier **Location** MI

### Return Shipping Labels

Return Label Type Indy M-Sat  
 No Shipper  
 With Shipper

### Bottle Labels

Blank  
 Pre-Printed No Sample IDs  
 Pre-Printed With Sample IDs

### Bottles

Boxed Cases  
 Individually Wrapped  
 Grouped By Sample ID/Matrix

### Trip Blanks

Include Trip Blanks

### Misc

Sampling Instructions  
 Custody Seal  
 Temp. Blanks  
 Coolers separate  
 Syringes \_\_\_\_\_

Extra Bubble Wrap  
 Short Hold/Rush Stickers  
 DI Water \_\_\_\_\_  
 USDA Regulated Soils  
 Dry Weight \_\_\_\_\_

### COC Options

Number of Blanks \_\_\_\_\_  
 Pre-Printed \_\_\_\_\_

# of Samp Matrix	Analysis	Qty / Samp	Container	Total	# of QC	Lot #	Notes
1	WT 8260 MSV VOC LL	3	40mL clear VOA vial HCl	3			
1	WT Trip Blank-8260 MSV VOC LL	3	40mL clear VOA vial HCl	3			Trip Blank
1	WT 353.2 N+N; 4500 NH3; TIN	1	250mL plastic H2SO4	1			
1	WT 6010 MET ICP - Fe	1	250mL plastic HNO3	1			
1	WT 2540C Total Dissolved Solids	1	250mL plastic unpreserved	1			
1	WT 4500 Chloride; 9038 Sulfate	1	250mL plastic unpreserved	1			

## Hazard Shipping Placard In Place : N/A

\*Sample receiving hours are typically 8am-5pm, but may differ by location. Please check with your Pace Project Manager.

\*Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.

\*Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample storage/disposal.

\*Payment term are net 30 days.

\*Please include the proposal number on the chain of custody to ensure proper billing.

### Sample Notes :

### LAB USE:

**Ship Date :** \_\_\_\_\_  
**Prepared By:** \_\_\_\_\_  
**Verified By:** \_\_\_\_\_

### CLIENT USE (Optional):

**Date Rec'd:** \_\_\_\_\_  
**Received By:** \_\_\_\_\_



February 21, 2024

Mary Siegan  
WSP  
46850 Magellan Drive  
Suite 190  
Novi, MI 48377

RE: Project: Smith's Creek LF SW 1Q2024  
Pace Project No.: 50365208

Dear Mary Siegan:

Enclosed are the analytical results for sample(s) received by the laboratory on February 07, 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.

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

- Pace Analytical Services - Indianapolis

Analysis of TDS for samples -003 and -004 had the over out of range for in-hold analysis. Sample -003 is reporting both in-hold and past-hold TDS results. Sample -004 has only past-hold TDS results available and reported.

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

Sincerely,

Brian Hall  
brian.hall@pacelabs.com  
(616)975-4500  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## CERTIFICATIONS

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Washington Dept of Ecology #: C1081

Wisconsin Laboratory #: 999788130

USDA Foreign Soil Permit #: 525-23-13-23119

USDA Compliance Agreement #: IN-SL-22-001

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### SAMPLE SUMMARY

Project: Smith's Creek LF SW 1Q2024  
Pace Project No.: 50365208

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50365208001	SW-U1	Water	02/06/24 11:15	02/07/24 09:15
50365208002	SW-U2	Water	02/06/24 10:50	02/07/24 09:15
50365208003	SW-D1A	Water	02/06/24 11:30	02/07/24 09:15
50365208004	SW-D2	Water	02/06/24 11:50	02/07/24 09:15

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### SAMPLE ANALYTE COUNT

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50365208001	SW-U1	EPA 9056	KBB	2	PASI-I
		EPA 6010	MTM	4	PASI-I
		SM 2320B	DAW	2	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 2540D	IRH	1	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50365208002	SW-U2	EPA 9056	KBB	2	PASI-I
		EPA 6010	MTM	4	PASI-I
		SM 2320B	DAW	2	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 2540D	IRH	1	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50365208003	SW-D1A	EPA 9056	ADM	2	PASI-I
		EPA 6010	MTM	4	PASI-I
		SM 2320B	DAW	2	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 2540D	IRH	1	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50365208004	SW-D2	EPA 9056	KBB	2	PASI-I
		EPA 6010	MTM	4	PASI-I
		SM 2320B	DAW	2	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 2540D	IRH	1	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



### SAMPLE ANALYTE COUNT

Project: Smith's Creek LF SW 1Q2024  
Pace Project No.: 50365208

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
--------	-----------	--------	----------	-------------------	------------

---

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## ANALYTICAL RESULTS

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

Sample: SW-U1	Lab ID: 50365208001	Collected: 02/06/24 11:15	Received: 02/07/24 09:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>9056 IC Anions</b>		Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis						
Chloride	<b>28000</b>	ug/L	10000	10		02/11/24 04:27	16887-00-6	
Sulfate	<b>12600</b>	ug/L	2000	1		02/11/24 04:09	14808-79-8	
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis						
Calcium	<b>54100</b>	ug/L	1000	1	02/09/24 08:01	02/10/24 13:46	7440-70-2	
Iron	<b>1380</b>	ug/L	100	1	02/09/24 08:01	02/10/24 13:46	7439-89-6	
Magnesium	<b>15000</b>	ug/L	1000	1	02/09/24 08:01	02/10/24 13:46	7439-95-4	
Sodium	<b>13300</b>	ug/L	1000	1	02/09/24 08:01	02/10/24 13:46	7440-23-5	
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B Pace Analytical Services - Indianapolis						
Alkalinity, Total as CaCO3	<b>165000</b>	ug/L	10000	1		02/08/24 20:31		
Alkalinity,Bicarbonate (CaCO3)	<b>165000</b>	ug/L	10000	1		02/08/24 20:31		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Indianapolis						
Total Dissolved Solids	<b>183000</b>	ug/L	20000	1		02/12/24 09:04		
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D Pace Analytical Services - Indianapolis						
Total Suspended Solids	<b>56200</b>	ug/L	5000	1		02/12/24 11:35		
<b>Total Inorganic Nitrogen</b>		Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis						
Total Inorganic Nitrogen	<b>101</b>	ug/L	20.0	1		02/21/24 16:12		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis						
Nitrogen, NO2 plus NO3	<b>101</b>	ug/L	20.0	1		02/17/24 14:25		
<b>4500 Ammonia Water Low Level</b>		Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis						
Nitrogen, Ammonia	<b>&lt;20.0</b>	ug/L	20.0	1		02/13/24 19:24	7664-41-7	
<b>5310C TOC</b>		Analytical Method: SM 5310C Pace Analytical Services - Indianapolis						
Total Organic Carbon	<b>8890</b>	ug/L	2000	4		02/14/24 04:45	7440-44-0	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.





### ANALYTICAL RESULTS

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

Sample: SW-U2	Lab ID: 50365208002	Collected: 02/06/24 10:50	Received: 02/07/24 09:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>9056 IC Anions</b>								
Analytical Method: EPA 9056								
Pace Analytical Services - Indianapolis								
Chloride	51700	ug/L	10000	10		02/11/24 05:58	16887-00-6	
Sulfate	23600	ug/L	2000	1		02/11/24 05:40	14808-79-8	
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Calcium	74200	ug/L	1000	1	02/09/24 08:01	02/10/24 13:48	7440-70-2	
Iron	131	ug/L	100	1	02/09/24 08:01	02/10/24 13:48	7439-89-6	
Magnesium	18800	ug/L	1000	1	02/09/24 08:01	02/10/24 13:48	7439-95-4	
Sodium	28700	ug/L	1000	1	02/09/24 08:01	02/10/24 13:48	7440-23-5	
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B								
Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	229000	ug/L	10000	1		02/08/24 20:31		
Alkalinity,Bicarbonate (CaCO3)	218000	ug/L	10000	1		02/08/24 20:31		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Pace Analytical Services - Indianapolis								
Total Dissolved Solids	314000	ug/L	20000	1		02/12/24 09:04		
<b>2540D Total Suspended Solids</b>								
Analytical Method: SM 2540D								
Pace Analytical Services - Indianapolis								
Total Suspended Solids	3200	ug/L	2500	1		02/12/24 11:35		
<b>Total Inorganic Nitrogen</b>								
Analytical Method: NO2+NO3+NH3 Calculation								
Pace Analytical Services - Indianapolis								
Total Inorganic Nitrogen	426	ug/L	20.0	1		02/21/24 16:12		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>								
Analytical Method: EPA 353.2								
Pace Analytical Services - Indianapolis								
Nitrogen, NO2 plus NO3	426	ug/L	20.0	1		02/17/24 14:26		
<b>4500 Ammonia Water Low Level</b>								
Analytical Method: SM-4500-NH3 G								
Pace Analytical Services - Indianapolis								
Nitrogen, Ammonia	<20.0	ug/L	20.0	1		02/13/24 19:25	7664-41-7	
<b>5310C TOC</b>								
Analytical Method: SM 5310C								
Pace Analytical Services - Indianapolis								
Total Organic Carbon	6980	ug/L	500	1		02/14/24 05:02	7440-44-0	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### ANALYTICAL RESULTS

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

Sample: SW-D1A	Lab ID: 50365208003	Collected: 02/06/24 11:30	Received: 02/07/24 09:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>9056 IC Anions</b>								
Analytical Method: EPA 9056								
Pace Analytical Services - Indianapolis								
Chloride	<b>21600</b>	ug/L	10000	10		02/21/24 11:47	16887-00-6	
Sulfate	<b>10600</b>	ug/L	2000	1		02/20/24 18:07	14808-79-8	
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Calcium	<b>141000</b>	ug/L	1000	1	02/09/24 08:01	02/10/24 13:49	7440-70-2	
Iron	<b>51800</b>	ug/L	100	1	02/09/24 08:01	02/10/24 13:49	7439-89-6	
Magnesium	<b>50300</b>	ug/L	1000	1	02/09/24 08:01	02/10/24 13:49	7439-95-4	
Sodium	<b>39500</b>	ug/L	1000	1	02/09/24 08:01	02/10/24 13:49	7440-23-5	
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B								
Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	<b>202000</b>	ug/L	10000	1		02/08/24 20:31		
Alkalinity,Bicarbonate (CaCO3)	<b>202000</b>	ug/L	10000	1		02/08/24 20:31		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Pace Analytical Services - Indianapolis								
Total Dissolved Solids	<b>160000</b>	ug/L	20000	1		02/12/24 09:13		1d
Total Dissolved Solids	<b>152000</b>	ug/L	80000	1		02/15/24 08:54		H5
<b>2540D Total Suspended Solids</b>								
Analytical Method: SM 2540D								
Pace Analytical Services - Indianapolis								
Total Suspended Solids	<b>1750000</b>	ug/L	83300	1		02/12/24 11:35		
<b>Total Inorganic Nitrogen</b>								
Analytical Method: NO2+NO3+NH3 Calculation								
Pace Analytical Services - Indianapolis								
Total Inorganic Nitrogen	<b>846</b>	ug/L	20.0	1		02/21/24 16:12		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>								
Analytical Method: EPA 353.2								
Pace Analytical Services - Indianapolis								
Nitrogen, NO2 plus NO3	<b>118</b>	ug/L	20.0	1		02/17/24 14:32		
<b>4500 Ammonia Water Low Level</b>								
Analytical Method: SM-4500-NH3 G								
Pace Analytical Services - Indianapolis								
Nitrogen, Ammonia	<b>728</b>	ug/L	20.0	1		02/13/24 19:26	7664-41-7	
<b>5310C TOC</b>								
Analytical Method: SM 5310C								
Pace Analytical Services - Indianapolis								
Total Organic Carbon	<b>8560</b>	ug/L	2000	4		02/14/24 05:13	7440-44-0	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### ANALYTICAL RESULTS

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

Sample: SW-D2	Lab ID: 50365208004	Collected: 02/06/24 11:50	Received: 02/07/24 09:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>9056 IC Anions</b>		Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis						
Chloride	<b>6310</b>	ug/L	1000	1		02/11/24 06:53	16887-00-6	
Sulfate	<b>18600</b>	ug/L	2000	1		02/11/24 06:53	14808-79-8	
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis						
Calcium	<b>536000</b>	ug/L	5000	1	02/09/24 08:01	02/10/24 13:51	7440-70-2	
Iron	<b>592000</b>	ug/L	500	1	02/09/24 08:01	02/10/24 13:51	7439-89-6	
Magnesium	<b>314000</b>	ug/L	5000	1	02/09/24 08:01	02/10/24 13:51	7439-95-4	
Sodium	<b>10200</b>	ug/L	5000	1	02/09/24 08:01	02/10/24 13:51	7440-23-5	
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B Pace Analytical Services - Indianapolis						
Alkalinity, Total as CaCO3	<b>294000</b>	ug/L	10000	1		02/08/24 20:31		
Alkalinity,Bicarbonate (CaCO3)	<b>294000</b>	ug/L	10000	1		02/08/24 20:31		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Indianapolis						
Total Dissolved Solids	<b>168000</b>	ug/L	20000	1		02/15/24 08:55		H1
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D Pace Analytical Services - Indianapolis						
Total Suspended Solids	<b>10900000</b>	ug/L	250000	1		02/12/24 11:35		
<b>Total Inorganic Nitrogen</b>		Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis						
Total Inorganic Nitrogen	<b>169</b>	ug/L	20.0	1		02/21/24 16:12		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis						
Nitrogen, NO2 plus NO3	<b>41.9</b>	ug/L	20.0	1		02/17/24 14:33		
<b>4500 Ammonia Water Low Level</b>		Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis						
Nitrogen, Ammonia	<b>127</b>	ug/L	20.0	1		02/13/24 19:27	7664-41-7	
<b>5310C TOC</b>		Analytical Method: SM 5310C Pace Analytical Services - Indianapolis						
Total Organic Carbon	<b>30000</b>	ug/L	10000	20		02/14/24 05:23	7440-44-0	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF SW 1Q2024  
 Pace Project No.: 50365208

QC Batch: 774866 Analysis Method: EPA 9056  
 QC Batch Method: EPA 9056 Analysis Description: 9056 IC Anions  
 Laboratory: Pace Analytical Services - Indianapolis  
 Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

METHOD BLANK: 3547321 Matrix: Water  
 Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	<1000	1000	02/10/24 21:27	
Sulfate	ug/L	<2000	2000	02/10/24 21:27	

LABORATORY CONTROL SAMPLE: 3547322

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	2500	2460	98	80-120	
Sulfate	ug/L	5000	4760	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547323 3547324

Parameter	Units	50365255001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	656 mg/L	250000	250000	901000	901000	98	98	80-120	0	15	
Sulfate	ug/L	44.2 mg/L	50000	50000	89900	89700	91	91	80-120	0	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

QC Batch:	774583	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

METHOD BLANK: 3545984 Matrix: Water

Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	ug/L	<1000	1000	02/10/24 13:07	
Iron	ug/L	<100	100	02/10/24 13:07	
Magnesium	ug/L	<1000	1000	02/10/24 13:07	
Sodium	ug/L	<1000	1000	02/10/24 13:07	

LABORATORY CONTROL SAMPLE: 3545985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	ug/L	10000	10100	101	80-120	
Iron	ug/L	10000	9970	100	80-120	
Magnesium	ug/L	10000	9890	99	80-120	
Sodium	ug/L	10000	9720	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3545986 3545987

Parameter	Units	50364983001		3545987		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	ug/L	386000	10000	401000	396000	155	103	75-125	1	20	P6
Iron	ug/L	218000	10000	227000	226000	93	88	75-125	0	20	
Magnesium	ug/L	1040000	10000	1060000	1050000	273	121	75-125	1	20	P6
Sodium	ug/L	621000	10000	639000	630000	180	91	75-125	1	20	P6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



QUALITY CONTROL DATA

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

QC Batch: 774759

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

METHOD BLANK: 3546761

Matrix: Water

Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	ug/L	<10000	10000	02/08/24 20:31	
Alkalinity,Bicarbonate (CaCO3)	ug/L	<10000	10000	02/08/24 20:31	

LABORATORY CONTROL SAMPLE: 3546762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	ug/L	50000	48900	98	90-110	

SAMPLE DUPLICATE: 3546763

Parameter	Units	50365179001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	ug/L	150 mg/L	155000	3	20	
Alkalinity,Bicarbonate (CaCO3)	ug/L	150 mg/L	155000	3	20	

SAMPLE DUPLICATE: 3546764

Parameter	Units	50365179006 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	ug/L	196 mg/L	200000	2	20	
Alkalinity,Bicarbonate (CaCO3)	ug/L	178 mg/L	182000	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



### QUALITY CONTROL DATA

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

QC Batch: 775028

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365208001, 50365208002

METHOD BLANK: 3548328

Matrix: Water

Associated Lab Samples: 50365208001, 50365208002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	ug/L	<20000	20000	02/12/24 08:55	

LABORATORY CONTROL SAMPLE: 3548329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	ug/L	300000	269000	90	80-120	

SAMPLE DUPLICATE: 3548330

Parameter	Units	50365494001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	1560 mg/L	1580000	1	10	

SAMPLE DUPLICATE: 3548331

Parameter	Units	50365208002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	314000	340000	8	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



### QUALITY CONTROL DATA

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

QC Batch: 775029

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365208003

METHOD BLANK: 3548332

Matrix: Water

Associated Lab Samples: 50365208003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	ug/L	<20000	20000	02/12/24 09:12	1d

LABORATORY CONTROL SAMPLE: 3548333

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	ug/L	300000	276000	92	80-120	1d

SAMPLE DUPLICATE: 3548334

Parameter	Units	50365208003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	152000	161000	1	10	1d

SAMPLE DUPLICATE: 3548335

Parameter	Units	50365255001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	1140 mg/L	1130000	0	10	1d

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.





### QUALITY CONTROL DATA

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

QC Batch: 775648

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365208003, 50365208004

METHOD BLANK: 3550729

Matrix: Water

Associated Lab Samples: 50365208003, 50365208004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	ug/L	<20000	20000	02/15/24 08:53	

LABORATORY CONTROL SAMPLE: 3550730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	ug/L	300000	266000	89	80-120	

SAMPLE DUPLICATE: 3550731

Parameter	Units	50365208003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	152000	160000	5	10	H5

SAMPLE DUPLICATE: 3550732

Parameter	Units	50365494017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	4230 mg/L	3980000	6	10	H5

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



### QUALITY CONTROL DATA

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

QC Batch: 775056

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

METHOD BLANK: 3548407

Matrix: Water

Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	ug/L	<2500	2500	02/12/24 11:34	

LABORATORY CONTROL SAMPLE: 3548408

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	ug/L	100000	96000	96	80-120	

SAMPLE DUPLICATE: 3548410

Parameter	Units	50365208003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	ug/L	1750000	1760000	1	10	

SAMPLE DUPLICATE: 3548850

Parameter	Units	50365274002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	ug/L	113 mg/L	95000	17	10	R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

QC Batch:	776037	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate + Nitrite, preserved
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

METHOD BLANK: 3552757 Matrix: Water  
 Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	<20.0	20.0	02/17/24 14:21	

LABORATORY CONTROL SAMPLE: 3552758

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	2000	1820	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3552759 3552760

Parameter	Units	50365208002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	ug/L	426	2000	2000	2490	2460	103	102	90-110	1	20	

MATRIX SPIKE SAMPLE: 3552761

Parameter	Units	60446731002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	3.2 mg/L	4000	7450	107	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

QC Batch: 775405 Analysis Method: SM-4500-NH3 G  
 QC Batch Method: SM-4500-NH3 G Analysis Description: 4500 Ammonia Low Level  
 Laboratory: Pace Analytical Services - Indianapolis  
 Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

METHOD BLANK: 3549652 Matrix: Water  
 Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	ug/L	<20.0	20.0	02/13/24 19:08	

LABORATORY CONTROL SAMPLE: 3549653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	1000	978	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3549654 3549655

Parameter	Units	50365254001		50365254003		50365254001		% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Nitrogen, Ammonia	ug/L	6.9 mg/L	20000	20000	27400	27500	103	103	90-110	0	20	

MATRIX SPIKE SAMPLE: 3549661

Parameter	Units	50365254003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	0.79 mg/L	1000	1520	74	90-110	M0

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



**QUALITY CONTROL DATA**

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

QC Batch: 775343	Analysis Method: SM 5310C
QC Batch Method: SM 5310C	Analysis Description: 5310C Total Organic Carbon
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

METHOD BLANK: 3549495 Matrix: Water  
 Associated Lab Samples: 50365208001, 50365208002, 50365208003, 50365208004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	<500	500	02/14/24 02:14	

LABORATORY CONTROL SAMPLE: 3549496

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	10000	9580	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3549497 3549498

Parameter	Units	50365179006		50365179007		50365179008		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Total Organic Carbon	ug/L	1.6 mg/L	10000	10000	11200	11400	96	98	80-120	2	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3549499 3549500

Parameter	Units	50365255001		50365255002		50365255003		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Total Organic Carbon	ug/L	3.2J mg/L	20000	20000	21500	21500	91	92	80-120	0	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



## QUALIFIERS

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

---

### 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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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 - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

1d Oven temperature exceeded the acceptable range for this method. Results may be biased low.

H1 Analysis conducted outside the recognized method holding time.

H5 Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Smith's Creek LF SW 1Q2024

Pace Project No.: 50365208

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50365208001	SW-U1	EPA 9056	774866		
50365208002	SW-U2	EPA 9056	774866		
50365208003	SW-D1A	EPA 9056	774866		
50365208004	SW-D2	EPA 9056	774866		
50365208001	SW-U1	EPA 3010	774583	EPA 6010	774990
50365208002	SW-U2	EPA 3010	774583	EPA 6010	774990
50365208003	SW-D1A	EPA 3010	774583	EPA 6010	774990
50365208004	SW-D2	EPA 3010	774583	EPA 6010	774990
50365208001	SW-U1	SM 2320B	774759		
50365208002	SW-U2	SM 2320B	774759		
50365208003	SW-D1A	SM 2320B	774759		
50365208004	SW-D2	SM 2320B	774759		
50365208001	SW-U1	SM 2540C	775028		
50365208002	SW-U2	SM 2540C	775028		
50365208003	SW-D1A	SM 2540C	775029		
50365208003	SW-D1A	SM 2540C	775648		
50365208004	SW-D2	SM 2540C	775648		
50365208001	SW-U1	SM 2540D	775056		
50365208002	SW-U2	SM 2540D	775056		
50365208003	SW-D1A	SM 2540D	775056		
50365208004	SW-D2	SM 2540D	775056		
50365208001	SW-U1	NO2+NO3+NH3 Calculation	776719		
50365208002	SW-U2	NO2+NO3+NH3 Calculation	776719		
50365208003	SW-D1A	NO2+NO3+NH3 Calculation	776719		
50365208004	SW-D2	NO2+NO3+NH3 Calculation	776719		
50365208001	SW-U1	EPA 353.2	776037		
50365208002	SW-U2	EPA 353.2	776037		
50365208003	SW-D1A	EPA 353.2	776037		
50365208004	SW-D2	EPA 353.2	776037		
50365208001	SW-U1	SM-4500-NH3 G	775405		
50365208002	SW-U2	SM-4500-NH3 G	775405		
50365208003	SW-D1A	SM-4500-NH3 G	775405		
50365208004	SW-D2	SM-4500-NH3 G	775405		
50365208001	SW-U1	SM 5310C	775343		
50365208002	SW-U2	SM 5310C	775343		
50365208003	SW-D1A	SM 5310C	775343		
50365208004	SW-D2	SM 5310C	775343		

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

**CHAIN-OF-CUSTODY Analytical Request Document**

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here



Scan QR Code for instructions

Company Name: WSP - Novi, MI  
Street Address: 46850 Magellan Drive, Novi, MI 48377

Contact/Report To: Mary Siegan  
Phone #: (248)536-5435  
E-Mail: mary.siegan@wsp.com  
Cc E-Mail:

Customer Project #:   
Project Name: Smith's Creek LF SW Q134  
Site Collection Info/Facility ID (as applicable):

Invoice To: Mary Siegan  
Invoice E-Mail: mary.siegan@wsp.com  
Purchase Order # (if applicable):  
Quote #:

Specify Container Size \*\*  
2 3 1 3 3 3  
Identify Container Preservative Type\*\*\*  
1 1 1 3 3 2

\*\*Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other  
\*\*\* Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET  
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other  
Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No  
Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other  
Date Results Requested: 5/1

County / State origin of sample(s): Michigan  
DW PWSID # or WW Permit # as applicable:  
Field Filtered (if applicable): [ ] Yes [X] No  
Analysis:

Analysis Requested	2320B Alkalinity: 9056 IC Cl/SO4	2540C Total Dissolved Solids	2540D Total Suspended Solids	353.2 N+N: 4500 NH3LL; TIN	5310C TOC	6010 MET ICP
SW-U1	1	1	1	1	1	1
SW-U2	1	1	1	1	1	1
SW MEDIA	1	1	1	1	1	1
SW DZ	1	1	1	1	1	1

Proj. Mgr: **Brian Hall**  
AcctNum / Client ID:  
Table #:  
Profile / Template: **8218**  
Prelog / Bottle Ord. ID: **EZ 3056980**  
Sample Comment

Customer Sample ID	Matrix *	Comp / Grab	Composite Start		Collected or Composite End		# Cont.	Res. Chlorine	
			Date	Time	Date	Time		Results	Units
SW-U1	SW	G	2/6/24	1115	2/6/24	1115	6		
SW-U2	SW	G	↓	1050	↓	1050	↓		
SW MEDIA	SW	G	↓	1130	↓	1130	↓		
SW DZ	SW	G	↓	1150	↓	1150	↓		

Additional Instructions from Pace<sup>®</sup>:  
Metals - Ca,Fe,Mg,Na

Collected By: (Printed Name) *Jim Cisco*  
Signature: *[Signature]*

Customer Remarks / Special Conditions / Possible Hazards:  
# Coolers: 1 Thermometer ID: F Correction Factor (°C): -0.2 Obs. Temp. (°C): 1.5 Corrected Temp. (°C): 1.3 On Ice: 7

Relinquished by/Company: (Signature) *[Signature]* / WSP  
Date/Time: 2/6/24 1500  
Relinquished by/Company: (Signature) *[Signature]* / fedex  
Date/Time: 2-24 0915

Received by/Company: (Signature) *[Signature]*  
Date/Time: *[Signature]*  
Received by/Company: (Signature) *[Signature]*  
Date/Time: *[Signature]*

Tracking Number:  
Delivered by: [ ] In-Person [ ] Courier  
[X] FedEX [ ] UPS [ ] Other  
Page: 1 of 1





**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: 7-7-24 1542 CRR

- 1. Courier:  FED EX  UPS  CLIENT  PACE  NOW/JETT  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No  
(If yes) Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: **1 2 3 4 5 6 7 8 A B C D E F G H**
- 4. Cooler Temperature(s): 1.5 / 1.3     
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No  
Cooler temp should be above freezing to 6°C

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		/	All containers needing acid/base preservation have been pH CHECKED?. Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		/	Circle: <u>HNO3 (&lt;2)</u> <u>H2SO4 (&lt;2)</u> NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	/		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A
Rush TAT Requested (4 days or less):		/	Residual Chlorine Check (Total/Amenable/Free Cyanide)			-
Custody Signatures Present?	/		Headspace Wisconsin Sulfide?			-
Containers Intact?:	/		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	/		Trip Blank Present?		-	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			-

COMMENTS:

---



---



---



---



---



---



---



### Addresses

#### Order By :

Company WSP - Novi, MI  
 Contact Mary Siegan  
 Email mary.siegan@wsp.com  
 Address 46850 Magellan Drive  
 Address 2 Suite 190  
 City Novi  
 State MI Zip 48377  
 Phone (248)536-5435

#### Ship To :

Company WSP - Novi, MI  
 Contact Mary Siegan  
 Email mary.siegan@wsp.com  
 Address 46850 Magellan Drive  
 Address 2 Suite 190  
 City Novi  
 State MI Zip 48377  
 Phone (248)536-5435

#### Return To:

Company Pace Analytical Grand Rapids  
 Contact Brian Hall  
 Email brian.hall@pacelabs.com  
 Address 4171 40th Street SE  
 Address 2 \_\_\_\_\_  
 City Grand Rapids  
 State MI Zip 49512  
 Phone (616)975-4500

### Info

**Project Name** Smith's Creek LF SW Q134    **Due Date** 01/29/2024    **Profile** 8218    **Quote** \_\_\_\_\_  
**Project Manager** Hall, Brian    **Return Date** \_\_\_\_\_    **Carrier** Pace Courier    **Location** MI

#### Return Shipping Labels

Return Label Type Indy M-Sat  
 No Shipper  
 With Shipper

#### Bottle Labels

Blank  
 Pre-Printed No Sample IDs  
 Pre-Printed With Sample IDs

#### Bottles

Boxed Cases  
 Individually Wrapped  
 Grouped By Sample ID/Matrix

#### Trip Blanks

Include Trip Blanks

#### Misc

Sampling Instructions     Extra Bubble Wrap  
 Custody Seal     Short Hold/Rush Stickers  
 Temp. Blanks     DI Water \_\_\_\_\_  
 Coolers \_\_\_\_\_     USDA Regulated Soils  
 Syringes \_\_\_\_\_     Dry Weight \_\_\_\_\_

#### COC Options

Number of Blanks \_\_\_\_\_  
 Pre-Printed \_\_\_\_\_

# of Samp Matrix	Analysis	Qty / Samp	Container	Total	# of QC	Lot #	Notes
4	WT 2540D Total Suspended Solids	1	1L plastic unpreserved	4			
4	WT 5310C TOC	1	250mL amber glass H2SO4	4			
4	WT 353.2 N+N; 4500 NH3LL; TIN	1	250mL plastic H2SO4	4			
4	WT 6010 MET ICP	1	250mL plastic HNO3	4			
4	WT 2540C Total Dissolved Solids	1	250mL plastic unpreserved	4			
4	WT 2320B Alkalinity; 9056 IC Cl/SO4	1	500mL plastic unpreserved	4			

### Hazard Shipping Placard In Place : N/A

#### LAB USE:

\*Sample receiving hours are typically 8am-5pm, but may differ by location. Please check with your Pace Project Manager.

**Ship Date :** \_\_\_\_\_

\*Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.

**Prepared By:** \_\_\_\_\_

\*Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample storage/disposal.

**Verified By:** \_\_\_\_\_

\*Payment term are net 30 days.

#### CLIENT USE (Optional):

\*Please include the proposal number on the chain of custody to ensure proper billing.

**Date Rec'd:** \_\_\_\_\_

#### Sample Notes :

**Received By:** \_\_\_\_\_

Metals - Ca,Fe,Mg,Na

SAMPLE ID: Leachate

### LEACHATE SAMPLE COLLECTION RECORD

#### SITE IDENTIFICATION

COMPANY: St. Clair County  
FACILITY/SITE: Smiths Creek Landfill  
ADDRESS: 6779 Smiths Creek Rd., 48074  
CONTACT: Matt Williams  
PHONE: 248-459-3309

#### WEATHER CONDITIONS DURING SAMPLING

SKY: Clear  
WIND (mph): 40F 0  
AIR TEMPERATURE (°F): 40F

SAMPLING  NOT COLLECTED

SAMPLE DATE: 2/6  
SAMPLE TIME: 1215  
TOTAL BOTTLES COLLECTED: 4 + 3 WAG  
SAMPLE FILTERED DURING COLLECTION?   
SAMPLE CLARITY: turbid  
SAMPLE COLOR: black  
SAMPLE ODOR: strong

#### FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: 1215  
FINAL pH (S.U.): 7.34  
FINAL CONDUCTIVITY (µMHO/CM): 2026  
SAMPLE TEMPERATURE (°C): 12.9

#### EQUIPMENT

FIELD METER USED: YSI  
INITIAL CALIBRATION TIME: by lab  
FINAL CALIBRATION TIME: by lab  
FINAL CALIBRATION pH: 4, 7, 10  
FINAL CALIBRATION SC: 1.413  
FILTER TYPE USED: NA  
PUMP OR BAILER USED: bailer

SAMPLE COLLECTED BY: lc

SAMPLING COMPANY: WSP USA Inc.

SAMPLER'S ADDRESS: 27200 Haggerty Rd. Ste. B-12 Farmington Hills, Michigan

SAMPLER'S PHONE: 248-295-0135

CLIENT REPRESENTATIVES: \_\_\_\_\_

REGULATORY REPRESENTATIVES: \_\_\_\_\_

COMMENTS:

Sample ID

SW-D<sup>2</sup>~~4A~~

### SURFACE WATER SAMPLE COLLECTION RECORD

#### SITE IDENTIFICATION

COMPANY: St. Clair County  
 FACILITY/SITE: Smith's Creek Landfill  
 ADDRESS: 6779 Smith's Creek Rd., 48074  
 CONTACT: Matt Williams  
 PHONE: 248-459-3309

#### WEATHER CONDITIONS DURING SAMPLING

SKY: clear, sunny  
 WIND (mph): 10  
 AIR TEMPERATURE (°F): 38F

#### SAMPLING NOT COLLECTED

SAMPLE DATE: 2/16/23  
 SAMPLE TIME: 11:50  
 TOTAL BOTTLES COLLECTED: 4  
 SAMPLE FILTERED DURING COLLECTION?   
 SAMPLE CLARIT turbid  
 SAMPLE COLOR: brown (silty)  
 SAMPLE ODOR: none

#### FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: 11:50  
 FINAL pH (S.U.): 7.57  
 FINAL CONDUCTIVITY (µMHO/CM): 4230  
 SAMPLE TEMPERATURE (°C): 2.2  
 DISSOLVED OXYGEN (mg/L): 9.89

#### EQUIPMENT

FIELD METER USED: YSI  
 INITIAL CALIBRATION TIME: by lab  
 FINAL CALIBRATION TIME: by lab  
 FINAL CALIBRATION pH: 4.7, 10  
 FINAL CALIBRATION SC: 1.4/3  
 DEIONIZED WATER SUPPLIED BY: lab

SAMPLE COLLECTED BY: KC

SAMPLING COMPANY: WSP USA Inc.

SAMPLER'S PHONE: 248-295-0135

SAMPLER'S ADDRESS: 27200 Haggerty Road, Ste B-12, Farmington Hills, Michigan

CLIENT REPRESENTATIVES: \_\_\_\_\_

REGULATORY REPRESENTATIVES: \_\_\_\_\_

COMMENTS:

Sample ID DIA  
SW-02

### SURFACE WATER SAMPLE COLLECTION RECORD

#### SITE IDENTIFICATION

COMPANY: St. Clair County  
FACILITY/SITE: Smiths Creek Landfill  
ADDRESS: 6779 Smiths Creek Rd., 48074  
CONTACT: Matt Williams  
PHONE: 248-459-3309

#### WEATHER CONDITIONS DURING SAMPLING

SKY: clear, sunny  
WIND (mph): 0  
AIR TEMPERATURE (°F): 37

SAMPLING  NOT COLLECTED

SAMPLE DATE: 2/6/24  
SAMPLE TIME: 1130  
TOTAL BOTTLES COLLECTED: 4  
SAMPLE FILTERED DURING COLLECTION?   
SAMPLE CLARIT turbid  
SAMPLE COLOR: brown (silty)  
SAMPLE ODOR: none

#### FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: 1130  
FINAL pH (S.U.): 7.68  
FINAL CONDUCTIVITY (µMHO/CM): 525.2  
SAMPLE TEMPERATURE (°C): 3.2  
DISSOLVED OXYGEN (mg/L): 11.07

#### EQUIPMENT

FIELD METER USED: YSI  
INITIAL CALIBRATION TIME: by lab  
FINAL CALIBRATION TIME: by lab  
FINAL CALIBRATION pH: 4.7, 10  
FINAL CALIBRATION SC: 1.4, 3  
DEIONIZED WATER SUPPLIED BY: lab

SAMPLE COLLECTED BY: \_\_\_\_\_

SAMPLING COMPANY: WSP USA Inc.

SAMPLER'S ADDRESS: 27200 Haggerty Road, Ste B-12, Farmington Hills, Michigan

SAMPLER'S PHONE: 248-295-0135

CLIENT REPRESENTATIVES: \_\_\_\_\_

REGULATORY REPRESENTATIVES: \_\_\_\_\_

COMMENTS:

Sample ID SW-U1

### SURFACE WATER SAMPLE COLLECTION RECORD

#### SITE IDENTIFICATION

COMPANY: St. Clair County  
FACILITY/SITE: Smiths Creek Landfill  
ADDRESS: 6779 Smiths Creek Rd., 48074  
CONTACT: Matt Williams  
PHONE: 248-459-3309

#### WEATHER CONDITIONS DURING SAMPLING

SKY: Sunny  
WIND (mph): 0  
AIR TEMPERATURE (°F): 39

#### SAMPLING NOT COLLECTED

SAMPLE DATE: 2/6/24  
SAMPLE TIME: 1115  
TOTAL BOTTLES COLLECTED: 4  
SAMPLE FILTERED DURING COLLECTION?   
SAMPLE CLARIT clear  
SAMPLE COLOR: none  
SAMPLE ODOR: none

#### FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: 1115  
FINAL pH (S.U.): 7.83  
FINAL CONDUCTIVITY (µMHO/CM): 499.9  
SAMPLE TEMPERATURE (°C): 3.6  
DISSOLVED OXYGEN (mg/L):: 12.24

#### EQUIPMENT

FIELD METER USED: YSI  
INITIAL CALIBRATION TIME: by lab  
FINAL CALIBRATION TIME: by lab  
FINAL CALIBRATION pH: 4, 7, 10  
FINAL CALIBRATION SC: 1.814  
DEIONIZED WATER SUPPLIED BY: lab

SAMPLE COLLECTED BY: LC

SAMPLING COMPANY: WSP USA Inc.

SAMPLER'S ADDRESS: 27200 Haggerty Road, Ste B-12, Farmington Hills, Michigan

SAMPLER'S PHONE: 248-295-0135

CLIENT REPRESENTATIVES: \_\_\_\_\_

REGULATORY REPRESENTATIVES: \_\_\_\_\_

COMMENTS:

Sample ID SW-U2

### SURFACE WATER SAMPLE COLLECTION RECORD

#### SITE IDENTIFICATION

COMPANY: St. Clair County  
FACILITY/SITE: Smiths Creek Landfill  
ADDRESS: 6779 Smiths Creek Rd., 48074  
CONTACT: Matt Williams  
PHONE: 248-459-3309

#### WEATHER CONDITIONS DURING SAMPLING

SKY: Sunny  
WIND (mph): 0  
AIR TEMPERATURE (°F): 40F

#### SAMPLING NOT COLLECTED

SAMPLE DATE: 2/6/23  
SAMPLE TIME: 1050  
TOTAL BOTTLES COLLECTED: 4  
SAMPLE FILTERED DURING COLLECTION?   
SAMPLE CLARIT clear  
SAMPLE COLOR: none  
SAMPLE ODOR: none

#### FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: 1050  
FINAL pH (S.U.): 6.80  
FINAL CONDUCTIVITY (µMHO/CM): 837  
SAMPLE TEMPERATURE (°C): 6.1  
DISSOLVED OXYGEN (mg/L):: 13.12

#### EQUIPMENT

FIELD METER USED: YSI  
INITIAL CALIBRATION TIME: by lab  
FINAL CALIBRATION TIME: by lab  
FINAL CALIBRATION pH: 4, 7, 10  
FINAL CALIBRATION SC: 1.413  
DEIONIZED WATER SUPPLIED BY: lab

SAMPLE COLLECTED BY: IC

SAMPLING COMPANY: WSP USA Inc.

SAMPLER'S ADDRESS: 27200 Haggerty Road, Ste B-12, Farmington Hills, Michigan

SAMPLER'S PHONE: 248-295-0135

CLIENT REPRESENTATIVES: \_\_\_\_\_

REGULATORY REPRESENTATIVES: \_\_\_\_\_

COMMENTS: